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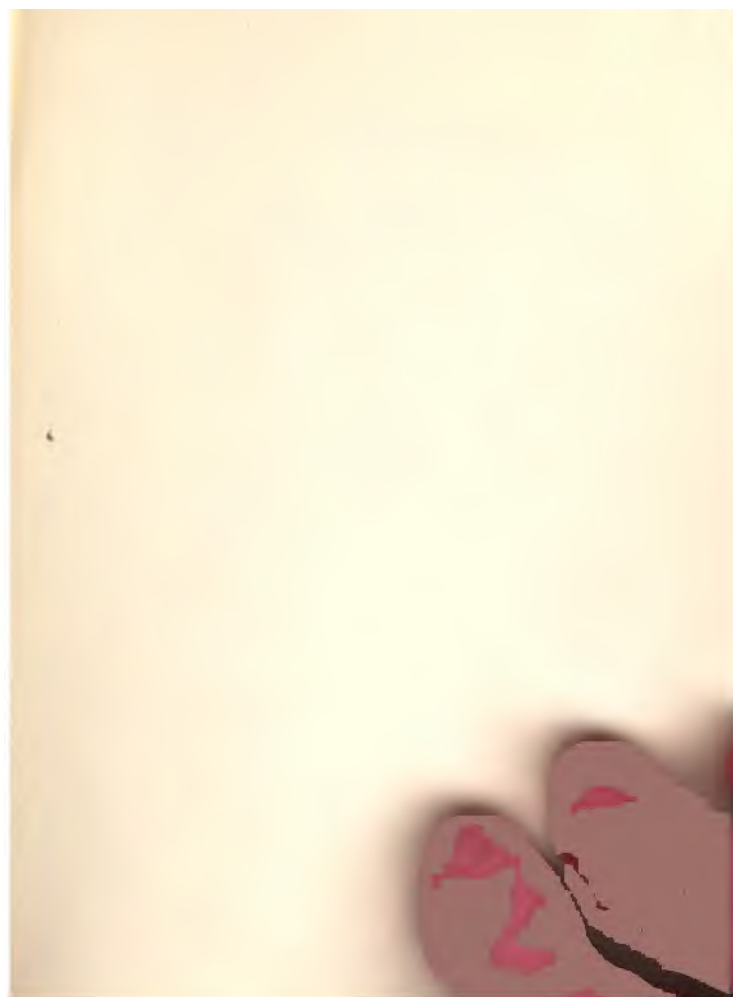
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Naval Militiaman's Handbook

BY

Lieut. William H. Stayton



New York
A. R. POPE
220 Fourth Ave.

1895

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APOLOGY.

The writer issues this little book despite the fact that he is conscious of its many defects and omissions, and fearful that it is not free from error.

It has been written merely that a beginning might be made, and the hope that some naval militiaman will be induced to revise and perfect it. In such a work there are many officers and men who would doubtless assist, and it is hoped that some united effort will be made to produce a proper handbook.

New York, July 1, 1895.

W. H. S.

CHAPTER I.

GENERAL.

Naval Militiamen should never forget that their organization is intended, primarily, for duty as a ship's company, and not as a battalion of separate divisions or companies.

The movement which has resulted in the formation of such organizations in this country is of such recent origin that the facilities available to the officers have not permitted the inauguration of systematic courses of drill or instruction, so that it has been difficult to keep always before the men the fact that they are members of a ship's company. Circumstances have compelled the adoption of the infantry or artillery section as the usual unit of formation, and this has too frequently resulted in leading the men to think of themselves as infantrymen. Further, the necessity of the rudimentary instruction of each individual recruit in the duties of a seaman has compelled the drilling of the several divisions of a battalion separately, so that the members of each division have come to regard it as an organization separate from, and independent of, the other divisions. This impression is erroneous. It must be remembered

that not only has the commanding officer of the organization authority to transfer men from one division to another, but that in actual service this authority is exercised so frequently that such a transfer excites no comment, even from the man transferred. In fact, on shipboard but little attention is paid by the men themselves to the divisional organization. A seaman will usually know what men are in his own part of the ship, or in his boat, or at his gun, but he makes no pretence of knowing who are in his division, and regards that organization as of comparatively little moment. He does, however, clearly understand the fact (which is and should be impressed upon him at every favorable opportunity) that he is a part of the ship's company, assigned, for the time, to some particular mess, gun, boat, division, company and watch, but that the Commander or Executive Officer may at any time change any or all of these.

Divisional spirit and divisional competition are, of course, desirable, and are productive of the increased efficiency which always accompanies competition, but this feeling of rivalry will grow of itself, and without encouragement, while "the ship's company feeling" is one that will not thrive unless fostered.

Pains should be taken to see that the men of every division know the officers of the other divisions, and render to them the proper salutes. So, the men should understand that they owe prompt obedience to officers of other divisions as well as to those of their own. Men of different divisions should be thrown together as much as possible, and petty officers especially should know by rank or grade, as well as by sight and name, every officer and petty officer in the organization.

CHAPTER II.

ORGANIZATION OF THE SHIP'S COMPANY.

Until very recently the cardinal principle governing the organization and distribution of the Ship's Company was that laid down in Section 103, Ordnance Instructions, which provides that "in distributing the petty officers, seamen and others to the guns and other stations in the several divisions it is desirable, as a general rule, that those stationed at the same gun, or near each other at quarters, should be drawn from different stations for working ship; so that a great loss at any one gun may not fall too heavily on any watch station."

As the characteristics of ships have changed so that "working ship" has become, so far as the deck force is concerned, a matter of comparative unimportance, there has been exhibited a tendency to abandon this principle of distribution, and to make all organization subsidiary to the efficient manning of the battery. The old principle has not, however, been entirely abandoned, for some of the old ships are still in service; but in the latest gunnery drill book it is

stated that "in distributing the petty officers, "seamen and others to the guns and other stations in the several divisions it is deemed advisable, as a general rule, now that the sail power of the ships has been so much curtailed, "that those stationed at the same gun or near each other at quarters should, as far as practicable, *be drawn from the same part of the ship where their association has already been "close."*

The italicized clause is believed to sound the keynote of the present tendency in naval organization.

A board of officers which has recently considered the subject of organization has recommended that the development of the principle be carried still further, and has proposed the inauguration of the "quadrantal system," the outlines of which are as follows:

The ship shall be divided by imaginary fore and aft and thwartship vertical planes into four parts, which shall be, as nearly as practicable, equal in battery power. To each of these "quadrants" shall be assigned one gun division, which shall not only man the guns in that quadrant, but do all the cleaning and general work there. This arrangement would do away with the division of the ship's company into watches. All

the men in an infantry or artillery section and all those in a boat's crew, or a mess, would be drawn from one division. The system contemplates the division of the ship's company into "divisions," or groups of men, who shall be given every opportunity of knowing and understanding one another, and who shall accordingly drill, work, mess and berth with men of the same group.

In voluntary organizations, where drills are necessarily less frequent than in the regular service, it is specially desirable that the men of each gun division be always drilled and instructed by the officers of their own division. Hence it is desirable to assign an entire division to one watch; but this course is not in accordance with that paragraph of the Gunnery Drill Book which provides that "to secure the ability of the watch "on deck to clear away all the guns of the main "battery on the menaced broadside the first part "(the odd numbers) of the crew of the odd-numbered guns should be drawn from the starboard watch, and the second part (the even numbers) from the port watch. For the even-numbered guns the reverse rule should obtain."

In some instances the quadrantal system has been modified to meet the requirements of particular ships. The modification which seems to

have met with most favor in the service may be described briefly as follows:

There are four gun divisions, the first being at the forward and the second at the after guns on the upper deck; the third at the forward, and the fourth at the after guns on the lower deck. The "ship's number" of each man in the first division begins with 1, of each man in the second division with 2, and so on. The second figure in the man's ship's number indicates his part, and the third figure indicates his individual number in that part. Thus 111 (read eleven-one) is in the first division, first part, and is number 1 in that part; 123 (read twelve-three) is number 3, in the first division, second part; 4312 (read forty-three-twelve) is in the fourth division, third part, number 12. Each division is divided into four parts. The first and third parts compose the starboard, and the second and fourth parts the port watch.

One of the best features of this system is the facility with which it permits of the repeated subdivision of the ship's company. Thus, if one-half of the ship's company is needed on deck, either two of the four divisions, or the starboard watch (the odd-numbered parts from all divisions), or the port watch (the even-numbered parts from all divisions) may be called.

If only one-fourth of the ship's company is needed, we may call only the first part to duty. If one-eighth be required, call the first part of the even-numbered divisions.

It will be seen that this system lends itself with singular felicity to the plan of organization almost universally adopted by the Naval Militia. Perhaps this is due to the fact that both systems owe their adoption to men who received their training at the Naval Academy. There, the battalion of cadets was composed of four divisions of four crews each, and most Naval Militia battalions have chosen the same form of organization. If, now, we change the name "crew" to "part," we shall have the new quadrantal system, and our men may be marched aboard ship and dropped quietly into the watch quarter and station bill without any change of their numbers, divisions, parts or watches.

CHAPTER III.

WHAT DRILLS ARE NECESSARY.

Undoubtedly the most important question presenting itself to Naval Militiamen is, "What duties shall we be called upon to perform in actual service?" Upon the answer to this question will depend the answer to another question of very serious import, viz: "What course of drill and instruction will best fit us to perform the duties for which we may be called upon?"

We cannot answer the first question until we determine the meaning of the words, "actual service." It will hardly do to confine these words to meaning service against a foreign enemy. Our Militia organizations are much more frequently called out to suppress domestic disturbances than to oppose a National foe. From the very nature of our institutions and from the composition of the National Guard and Militia forces of our country, it follows that not only the General Government but our respective States have the right to call the citizen soldiery to arms. Indeed, our chief support is, and must continue to be, State rather than

Federal; and so, we must be prepared to respond with as much promptness and efficiency to the call of the Governor as to that of the President. No Naval Militia organization has yet been called on to meet a foreign enemy, but at least two have been called out on occasions of local disturbances.

What duties are the State authorities likely to call upon us to perform? If we judge from the experience of the past, and the threats of the present, the preservation of order during strikes will be a not infrequent task. If the strikes and the accompanying disorder are inland, or not connected with the water front, the occasion is one calling for the services of the infantryman or National Guardsman. But most of the great strikes of the past, which have been accompanied by serious violence and disorder, have been railroad strikes, and as our railroads are growing in mileage and importance, and increasing in the volume of business and the number of employes, it is but fair to presume that the serious disorders of the near future will accompany strikes on the part of the employes of the great transportation lines. Most of such lines have their terminals on our water fronts, and it is the terminal property that the rioters generally endeavor to seize. Such a

seizure is likely to result in calling the Naval Militiamen to duty. It is for just such duty that we should prepare, for it is the duty we are most likely to be called upon to perform first.

Much of this service will be analogous to that of the infantryman. Not all of it, however. Suppose that rioters have seized and are holding the wharves and piers constituting a railroad terminal. To attack in infantry formation, or from the land side, is to force the mob to the ends of the piers, whence escape is impracticable, and where, driven to a corner, they will fight, not to hold the property, but for sheer self-preservation. Clearly the attack should be made from the water, so that the line of retreat will be left open, for the first effort should be to gain possession of the property, and to disperse, not destroy, the mob.

Suppose the attack to have been made from the water side, the Naval Militia will land, and at once form as a naval brigade, a mixed force of infantry and artillery; and, hence, to the efficient performance of this duty, an accurate acquaintance with the infantry and artillery drills is essential.

But in what formation will the actual attack be made? Clearly, in that formation in which a naval brigade always lands; from cutters,

launches and other small boats; or, it may be, from tugs. In any event, the artillery, the field pieces, will be mounted in the bows, and will be used for destroying any extemporized breast-works, for dispersing the mob at long range, and largely by moral effect, and for protecting the landing of the infantry. If the landing is from small boats, most of the infantry force will, of course, be at the oars, but some of them will be detailed as sharpshooters.

The questions, therefore, as to what duties the State is most likely to call upon us to perform, and how we are to prepare to perform them, should, it seems, be answered thus:

She is most likely to call upon us to suppress disorders along the water front; to render that service most efficiently we must operate as a naval brigade, first afloat and then ashore; and to best prepare ourselves for these duties, not only should we be well drilled, both as infantry and as artillery, but especially should we, from drill and experience, be prepared to properly handle our boats under oars, and at the same time to work with rapidity and precision the artillery pieces in the bows. So, too, our boat's crew must be well instructed as to how to land at a wharf or pier, so that on making the landing the boat may be quickly

and quietly secured; the boatkeeper assume charge of her; the infantry land, deploy and protect the artillery; the artillery disembark and assemble the pieces; and the combined force merge into a tactically formed naval brigade, while the boatkeeper has swung the boat's head out and prepared her to receive the force, in case of a repulse, and to mount the field piece in the stern.

The exercises, then, essential to the preparation for this sort of service are infantry, artillery and boat drill, and drill in the service of the artillery pieces in boats.

The next point to be considered is, what duties is the National Government likely to call upon us to perform, and how are we to prepare ourselves to perform them. At present it can hardly be said to be settled whether the scenes of the Naval Militiaman's service in case of war will be on the decks of sea-going men-of-war, or on those of the coast and harbor defence vessels. There are many Naval officers who believe that in time of war the Navy will require a large enlisted force, that it will be the duty of the Naval Militia to furnish this force, and that our course of drills should be such as to prepare us to perform the duties of the modern man-of-war's-man. If this view is

to prevail, then our principal drills, by way of preparation for this service, should be the gun drill. This should be supplemented by infantry, artillery and boat drills.

On the other hand, however, there are many Naval officers who maintain that our preparation should be for coast and harbor defence work. Those holding this opinion point out the fact that the necessity for the able seaman no longer exists; that there is but little sailorizing aboard the modern man-of-war; that whereas, in the old days it took a man two years to learn to work ship, and so to become an efficient sailor, now as he has nothing to do with working ship, he can give up all his time to his gun drill, and so become in a week or two a helpful and fairly proficient member of a gun's crew. These officers, therefore, believe that the obtaining of the necessary quota of sailors in the next war will be a comparatively easy matter, since it will take no more training to make a man a sailor than it would to make him a soldier.

If this view shall prove to be the correct one, then we may expect that for the crews of seagoing vessels the Navy will furnish its own men without calling out the Naval Militia, and that our organizations will, therefore, form a

part of the inner line of defence, and be assigned to the protection of the coasts and harbors.

How, then, will the coasts and harbors be defended, and what will be our duties?

They will surely be defended, in part, by a system of mines and torpedoes, and these means of defence we should carefully study. The same may be said of torpedo boats. All of these entail much boat work, and emphasize the importance of boat drills.

So, doubtless, monitors and other vessels will take part in the defence, and we must consequently be familiar with the gun drills, and be in condition to furnish men who are accurate marksmen with the great guns.

In all of the matters so far mentioned, however, we are merely supplementing the Navy—merely doing work which the half-trained sailor man might do as efficiently. Is there not some work in this field that we can, by reason of superior advantages, do better than the blue jacket? Clearly, there is. The one marked advantage that we have over the officers and men in the regular service is that we stay on shore and in port much longer than they do. Let us, then, utilize this advantage to know more of our coasts and harbors than they do.

A Naval officer must know something of the whole coast-line of the United States, and his knowledge must, of necessity, be general; we need to know only the coast in our particular locality, and our knowledge should, therefore, be specific. Every Naval Militia organization should, in time of war, be prepared to furnish to the Navy men having exact and minute knowledge of all the nearby coasts and harbors; men who will know not merely where a ship may or may not safely go, but where torpedo boats and small boats may venture, where they may be concealed, and by what difficult or unbuoyed passages they may make short cuts to attack or escape from an enemy; where there is the best landing for boats; where water and provisions may be obtained; where repairs may be made; where yachts and tugs may be obtained, and the particulars as to their draught and power; where torpedo boats may lay concealed but in readiness to dart out on an enemy; where batteries may be most effectively placed on shore; where telegraph and cable lines and railroads are located, and, in short, all that the most complete war map could show. The organization which in time of war gives to the Nation's officers some strategic information which will assist them in winning a battle or in

successfully defending a port, renders a much more useful service than one which fights as bravely and as desperately as did the crew of the Chesapeake.

CHAPTER IV.

DRILLS.

If the views expressed in the last preceding chapter are approximately correct, we will not be wrong in devoting much of our time to infantry, artillery and boat drills, and a few words about those drills, and some others that should find a place in our exercises, will not be amiss.

1. INFANTRY DRILL.

The Naval Militiaman, in consequence of the pleasing variety of his drills, has a decided advantage over his brother of the National Guard, whose only drill is that of the infantryman. But while it is frequently a pleasant relief to abandon the "drill regulations" and take up seamanship, or navigation, or broadswords, or the handling of boats, the infantry drill is, nevertheless, one of the most important subjects for the exercise and instruction of the Naval Militiaman. Whatever be the duty he is called upon to perform, he will find a familiarity with the infantry drill regulations always helpful and generally essential. Do not, therefore, in favor of more agreeable exercises, neglect the infantry drill.

There is, unfortunately, a somewhat prevalent impression that a sailor ought not to know much about infantry. If he does, he is too frequently taunted with being a "soldier." Clearly, this idea is founded wholly in error. If we have drill regulations we should have some knowledge of them, be we soldiers or sailors; and it can never be a just ground of reproach to any man that he performed a duty strictly and precisely, rather than indifferently and slovenly. The idea that it is sailorlike to be unprecise and inexact in the infantry drill has gained increased currency since the new regulations have adopted what has been called the "get there" manual. It is asserted that these regulations do not contemplate a precise or uniform drill, and that, in the manual of arms especially, the men are to pass from one position to another in any convenient fashion, and without the regularity and cadence that mark the soldier's execution of the manual. This idea is, we believe, erroneous. The drill book itself, we think, countenances no such laxity. In paragraph 314 of that book it is laid down that "Every drill in extended order (which is necessarily somewhat loose and inexact), will be followed by a close order movement, in which "precision of execution will be exacted." Clearly

this does contemplate allowing the men to acquire habits of lack of precision. So, at paragraph 44, the instructor in the "school of the squad" is commanded to exact "by degrees, the desired precision and uniformity." Drill, then, in infantry, as well as in everything else, as well and as accurately as you can.

In the regular service, where the men drill almost every day, it has been found that the frequent handling of the piece soon enables the men to get the cadence and to attain precision and uniformity. In Naval Militia organizations, however, where drills can be held only once a week, and where only a very small proportion of them can be devoted to infantry, it has been found almost impossible to attain the necessary precision without dividing the movements in the manual into numbers, or at least explaining the various movements in much greater detail than that in which they are explained in the drill book.

In drilling a division of Naval Militiamen the writer has found it advantageous, *in giving a recruit his first few lessons in the manual*, to depart somewhat from the drill book and divide the various movements into three or four numbers each.

So it has been found beneficial to lay down

some rules governing the execution of the manual. The rules which the writer has found most beneficial are the following:

Rule I.—In executing any movement in the manual, the disengaged hand grasps the piece in what is to be the final position of that hand, provided the piece is to rest in that hand at the close of the movement.

That is, whenever, during any movement in the manual, the piece is grasped by either hand, that hand is not subsequently shifted, but it grasps the piece at once in the position in which it is to remain, so that no shifting will be necessary.

Thus, for instance, at the slope, the left hand is under the butt; now in coming from the order to the slope it might seem convenient to grasp the piece with the left hand somewhere along the barrel, carry the piece to the left shoulder, at the same time slipping the right hand down, and then changing the left hand to the butt. This, however, must not be done, for it would violate the rule, since it would involve changing the position of the left hand after it had once grasped the piece. And so, though it is somewhat awkward to carry the piece in the right hand from the order to a position so high up on the left side that the left hand may

reach under the butt, yet that is what must be done, because when the left hand first grasps the piece it must grasp it in its final position.

(To this rule there is an apparent exception in the case of going from the slope to the shoulder, or vice versa, but the exception is only apparent, for the intermediate position of port must be assumed so that there are really two movements in one.)

Rule II.—In almost all positions of the manual, where the piece is grasped by the left hand, that hand is at the sight; and the right hand is at the small of the stock.

This is true, for instance, in the *present*, *port*, *charge bayonets* and *ready*, and, as to the position of the left hand, it is also true in passing to the *shoulder* (the balance being, practically, at the sight), or in coming down from the *shoulder*.

To understand Rule III. Bring the piece to an order, grasping it firmly with the right hand. Now, without allowing that hand to change its position, raise the piece and note carefully the position in which the right hand grasps the barrel. Fix this position firmly in mind, as being so many inches above or below the band or the sight. (The position will, of course, vary according to the man's height and physical conformation.) This position of the right hand on

the barrel may be called the *order position*. Hence:

Rule III.—Know the *order position* well, and in coming from any position in the manual to the order, grasp the piece with the right hand at the *order position*, so that, the hand hanging naturally by the side, the butt of the piece will just reach the ground and strike it easily without necessitating the moving of the hand either up or down the piece.

Rule IV.—In coming from a shoulder position (that is, either the *shoulder* or the *slope*), to any other position in the manual, the first part of the movement is executed by bringing the piece to a vertical position in the hand already grasping it, and at the same time seizing it with the other hand in the proper position.

Rule V.—There are five positions of the piece which may be called the ordinary positions, and from any one of these positions any one of the others may be assumed directly and by a single command.

These five positions are, first, the *order*, which is the habitual position when at a halt; second and third the two positions in front of the centre of the body, the *present* and the *port*; fourth the position on the right shoulder (the *shoulder*), and fifth, the position on the left shoulder (the *slope*).

These rules having been explained and practically illustrated to the men, they are then brought to the *order*, and required to pass successively to each of the other four ordinary positions, returning in each case to the *order*. In thus executing the manual, the application of the different rules is pointed out.

Thus, being at the *order*, the command is brought to the *present*, applying the rules as follows:

Rule I requires that the left hand should grasp the piece in its *final* position. Rule II fixes the final position of the left hand, as being at the sight, and at the same time provides for shifting the right hand to the small of the stock.

In returning from the *present* to the *order*, Rule III prescribes the position in which the right hand is to seize the piece.

In coming from the *order* to the *port*, and in returning thence to the *order*, the same rules apply as in the case of coming to and returning from the *present*.

In coming from the *order* to the *shoulder*, Rule I cannot apply, since at the close of the movement the left hand will not be touching the piece. Rule II applies, and provides that in raising the piece to the right shoulder the left

hand grasps the piece at the sight (balance); so, Rule I requires that when the right hand, having assisted in raising the piece, is about to regrasp it, it shall seize the piece in the final position, that is, under the butt.

Returning from the *shoulder* to the *order*, Rule IV provides that the piece is to be brought to a vertical position in the right hand, and at the same time seized with the left hand at the proper position. Rule II fixes this *proper* position of the left hand, while Rule III provides that when the right hand has been released it shall immediately regrasp the piece at the *order* position.

Coming from the *order* to the *slope*, Rule I provides that when the left hand first touches the piece it shall be in the *final* position, that is, under the butt. Hence, the right hand must carry the piece high up on the left side.

To come from the *slope* back to the *order*, the first part of the movement is determined by Rule IV, which directs that the piece be brought to a vertical position in the left hand, and at the same time grasped with the right. Rule I requires that the right hand shall go at once to its final position, and Rule III fixes this as the *order* position.

Thus we have been from the *order* to each of

the other four ordinary positions and back again.

Now take the second of these ordinary positions, the *present*, and go from that to each of the other four and back.

From the *present* to the *order* and back has been considered already.

From the *present* to the *port* requires no change in the position of the hands, and calls for no special consideration.

From the *present* to the *shoulder*: Rule I provides that the right hand is to be at once shifted to its final position under the butt; the piece is, of course, in the meantime, to be carried in the left hand to the right shoulder.

From the *shoulder*, back to the *present*: Rule IV, bring the piece to the vertical in the right hand, grasping it at the same time with the left in the proper position. Rule I, this *proper* position is the *final* position. Rule II, the final position of the left hand is at the sight, and by the same rule the right hand goes to the small of the stock.

From the *present* to the *slope*: Rule I provides that the left hand is to go at once to its final position under the butt; and in the mean time the right hand (remaining at the small of the stock), is, of course, to carry the piece to the left shoulder.

From the *slope* to the *present*: Rule IV, come to the vertical in the left hand, and grasp the piece with the right in the (Rule I), final position, which is (Rule II), at the small of the stock. As the right hand brings the piece down in front of the centre of the body, the left hand goes (Rule I), to its final position, which is (Rule II), at the sight.

We have thus gone from the *present* to each of the other ordinary positions, and back again.

Now go, in the same manner, using the rules, from the third ordinary position, the *port*, to each of the others; then successively from the fourth and fifth, the *shoulder* and *slope*, to each of the others.

Before proceeding further this exercise should be repeated until the men are familiar with the ordinary positions. The other, or extraordinary positions, may then be taken up. Then it should be explained that, as a general rule, these extraordinary positions can be assumed from only one or two other positions. Thus, the first of them is the *parade rest*, which can be assumed only from the *order*.

II. ARTILLERY.

Every section in the organization should be exercised both as an infantry and as an artillery

POINT!

1 steadies the gun with his arm and shoulder, seizes trigger lanyard, and, with his eyes ranging over the sight, steadies the piece upon the object.

2 adjusts sight and attends clamps.

COMMENCE FIRING!

1 aims and fires, reloads, aims and fires, and so continues.

2 tends sights and clamps.

3 loads; keeps empty cases clear of guns; when ammunition is nearly exhausted calls out "shell," and with the assistance of 2 provides a fresh box.

CEASE FIRING!

1 drops lanyard and steadies piece until pivot and cradle clamps are tightened by 2.

SECURE.

The gun is laid in the securing position and each man returns what he provided and secures what he cast loose.

DRILL OF 1-PDR. IN BOATS.

The drill of the Hotchkiss 1-pdr. will be found on pages 153-154 "Instructions for Infantry and Artillery, United States Navy." That for the

Driggs-Schroeder 1-pdr. will be similar, except that the plug lever being on the left side of the breech of these guns, 2 is stationed on that side. In loading, 3 enters the cartridge; 2, with the right hand, shoves it home, and then closes breech with the left hand.

DRILL OF 3-PDR. AND 6-PDR. R. F. GUNS.
4 MEN.

No. 1.—First Captain.

No. 2.—Second Captain.

No. 3.—First loader and shellman.

No. 4.—Second loader and shellman.

The gun being mounted in place, lashed and clamped, the commands will be the same as in the case of the 1-pdr.

CAST LOOSE AND PROVIDE.

1 performs the same duties as at the 1-pdr., and, in addition, removes the drill-hook and hooks up spring (if at a Hotchkiss gun). 1 does not provide the arms.

2 provides reserve box; provides four revolvers and belts and puts them in the rack near the gun; provides clean swab; provides drill apron; sees clamps and carriage in working order.

3 and 4 bring ammunition. 3 provides wet swab; 4 provides bucket of water.

At "LOAD," "POINT," "COMMENCE FIRING," and "CEASE FIRING," the duties are the same as at the 1-pdr., 4 passing the cartridge to 3.

DRILL OF GATLING GUN MOUNTED ON
BOARD SHIP OR IN A BOAT. 3 MEN.

No. 1.—First Captain.

No. 2.—Second Captain.

No. 3.—Loader.

SILENCE.

Face the gun and prepare for

CAST LOOSE AND PROVIDE!

1 commands; ships pointing lever, if used; sees gun and mount in working order; places sights; sees in place the gear and implements for the service of the gun; provides three revolvers and belts, and places them in rack near the guns. Reports "ready" to the officer in charge.

2 sees crank ready for use; provides reserve box, if any; assists 3 to bring ammunition.

3 sees gun clear for feeding; assists 2 to bring ammunition.

LOAD!

1 places himself at the pointing lever, and, as soon as the muzzle is unclamped, lays it with the muzzle out-board, and observes the object.

2 loosens horizontal and vertical clamps, and prepares to work the crank.

3 brings up ammunition, places it on the piece and returns for more.

POINT!

1 adjusts the sight; works the elevator, if in gear; if not, he steadies the gun by the pointing lever, and, with his eye ranging over the sights, directs the piece on the object.

2 attends the clamps, if necessary, and then goes to the crank; at a sliding pivot mount adjusts the position of the pivot for train.

FIRE!

1 points and commands.

2 works the crank, slowly at first, until the range is well determined by 1.

3 attends the feed and supplies fresh feed cases. If assistance is required in bringing ammunition, it is rendered by 2.

CEASE FIRING!

The cartridges are withdrawn.

1 steadies the gun for clamping.

2 clamps the piece; secures the crank; places the firing pin out of action.

SECURE!

The piece is laid in the securing position and each man returns what he provided and secures what he cast loose.

III. THE NAVAL BRIGADE.

The first paragraph of the "Instructions for Infantry" provides that "each ship and squadron will have a permanently organized landing force, composed of infantry and artillery." This force is called the "naval brigade," though properly it should not be so called unless actually organized as a brigade.

"The proportion of infantry to artillery in a naval brigade varies with the nature of the service to be performed."

"In line the infantry is on the right, and on the march its position is at the head of the column."

While the old infantry and artillery tactics have recently been superseded by the new "Drill Regulations," neither tactics nor drill regulations have yet been provided for the naval brigade. In practice, the chief of brigade uses the commands prescribed for an infantry brigade, the chiefs of the infantry battalion execute the movement in accordance with the infantry drill regulations, and the chiefs of the artillery

battalions give the commands which would be appropriate for performing the manoeuvre if the brigade were composed entirely of battalions of artillery.

Some general rules concerning the organization of the Naval Brigade, and especially regarding the composition of the corps of pioneers, the ambulance party, the signal corps, and the detail of cooks and mess men will be found in the introduction of the infantry drill regulations; other useful information on the same subject is to be found in the Ordnance Instructions, but the best book on the subject is the compilation known as "Naval Professional Papers, No. 20," prepared by Lieutenant Gilman and issued by the Navy Department in 1886.

The Ordnance Instructions provide that the pioneers shall be armed, two with a saw, axe, cold-chisel and hammer each; two with a pick-axe and spade each, two with a small crowbar and sledge-hammer or such intrenching tools as the nature of the expedition may require—the tools being slung on the men's backs.

The ambulance party should be in charge of a medical officer or an apothecary, and besides carrying stretchers, should be provided with tourniquets, bandages, and such medicines as will, in the opinion of the medical officer, be

most likely to be required, in view of the nature of the service and the character of the country and the climate. Every man in this party should understand the use of the tourniquet and know how to make a temporary one with a neckerchief or a knife lanyard. The members of this party should display the red cross on their sleeves. They are not armed.

The signal corps should carry a full outfit of day and night signals and a powerful set of field glasses for reading distant signals. As the Army and Navy now use different codes for the wigwag alphabet, there should be men in the signal corps who are familiar with the Morse Code, so that the Army or National Guard may be communicated with in case of necessity.

The cooks and messmen should be required to know practically how to prepare coffee and simple dishes. On drills or when no cooking will be required the cooks and messmen should use their mess-kettles to keep the command supplied with drinking-water.

"The pioneers, ammunition party, signalmen
"and messmen will ordinarily be armed with
"revolvers. The commanding officer may direct
"the substitution of rifles for revolvers when-
"ever the special details are lightly equipped,
"or the circumstances of service require the
"change."

The Navy regulations provide that the commander-in-chief "shall cause the crews of ships "to be landed and exercised at camping, bivouacking and marching, carrying provisions, spare ammunition and other supplies necessary for a force that is to be self sustaining and "equipped for occupying a hostile country."

Not only the officers, but the petty officers should make themselves acquainted with the composition and weight of the rations and the weight of small-arm ammunition, and be prepared to tell at short notice the weight of provisions and ammunition required per day for a landing party of given strength, and should know what facilities are necessary to the proper transportation of such articles.

In this connection it is believed that useful hints and information will be obtained from the following extracts taken from an official report of the operations of a landing party from one of the ships of the Navy.

The party consisted of 103 officers and men, who landed at 4:30 p. m., July 13, and returned on board at 6 p. m. July 15. The detail was composed of 9 officers, one company of 34 enlisted men, a B. L. H. crew of 13, a 12 pdr. S. B. H. crew of 13, with field carriage arranged as a provision cart; a squad of 20 marines, 4 pio-

neers, an apothecary, a nurse, an armorer, 2 markers, a bugler, 2 cooks, and 2 officers' servants.

Twenty rounds of ammunition were served out to each man in the infantry command, and 1,000 rounds were taken as reserve ammunition; five rounds of pistol cartridges were allowed to each artilleryman, including the crew of the pioneer cart, and twenty rounds of ammunition were taken for the howitzers. Each man carried a blanket and a spare suit of blue, rolled lengthwise and slung over the left shoulder, his rain clothes or pea-jacket in a roll across the shoulders, and a pot, pan and spoon slung to his waist belt.

In the provision cart there were carried:

Beef, uncooked	90 lbs
Pork, uncooked.....	100 lbs
Bread	300 lbs
Sugar	45 lbs
Coffee	25 lbs
Pickles	30 lbs
Beans, uncooked.....	40 lbs
Dried fruit	20 lbs
Two boat stoves	180 lbs
Signal kits (day and night)....	10 lbs
Axe, saw, hammer and nails..	10 lbs
Extra ammunition	109 lbs
Officers' baggage	75 lbs

Total1,034 lbs

The point selected for the Camp was on a sandy plain without shelter and affording no wood for tent poles, which were supplied from the ship and carried on shore by the landing party.

The following articles were taken:

One lower studding-sail for tent for company of blue jackets.

One lower studding-sail for tent for artillerymen.

One topmast studding-sail for tent for squad of marines.

Two top-gallant studding-sails for tents for officers.

Two royals for sinks.

Boat sails for officers' tent and kitchens.

For tentpoles, top-gallant studding-sail yards and boat spars were used.

The landing and movement to the point selected for the camp were conducted as though the advance were into an enemy's country, and upon reaching the camping-ground the flankers of the leading detachment were posted as sentinels, and the officers of the day and of the guard were at once appointed. At 8 p. m. the inner line of blue-jacket sentineis was strengthened, an outer line of marine sentinels established, and a countersign given. Camp routine in an enemy's country was strictly observed.

Day and night signals were repeatedly used in exchanging messages with the ship. Target practice was had with rifles, revolvers and howitzers.

The boat stoves proved amply sufficient for the needs of the party. Boiling, frying, broiling, stewing—and, in fact, every feature in a culinary way except that of baking—were successfully accomplished.

The shelter tents were sufficient to accommodate one-third more men.

IV. REVOLVER DRILL.

In the artillery drill as well as in the exercises of the naval brigade, ability to effectively handle the revolver is essential. To interrupt the artillery exercises by giving the men the revolver manual will be found to make a pleasant break in the drill period and greatly to increase their efficiency as artillerymen.

As the revolver manual is not published in any book of general distribution, it has been thought proper to insert it here.

COMMANDS.

(Colt's double action Navy revolver.)

Caution.	Preparation.	Execut'n.
1.....	Pistol	Draw!
2. Round....	Single aim or single snap.....	Fire!
or		
Round....	Double aim or double snap.....	Fire!
3.....	Cartridges or pack.....	Load!
4.....	Return	Pistol.

1. "*Pistol*, DRAW!" (1 time and 2 motions). At the command "*pistol*," carry the right hand to the holster, loosen the flap catch by an outward and upward pull of the flap, pass the fingers under the grip, and loosen the pistol in the holster. At the command "DRAW," draw the pistol from the holster and carry it to the right shoulder, barrel vertical, hammer at height of shoulder, fingers clear of trigger and in rear of trigger guard. (When the cutlass is worn with the revolver, the holster will be on the right hip; normally, just in rear of the hip joint, but it may be moved in front of the hip by the command "*Pistols*, FRONT," when the occupation of the men is such as to make this position desirable. When the cutlass is not worn, the holster will be on the left hip; normally, in rear of the hip joint, but it may be moved to the front as before. In any of these four positions the grip will be presented to the hand conveniently, and in any of them the left hand may, at the command "*pistol*," be carried to the holster to steady it against the pull in drawing, in case it has become wet.)

2. "*Round*." This cautionary command is to be given only when all the chambers are to be emptied. When but one shot is to be fired no cautionary command is given. Instead of

"Round," the commands "Two" or "Three" may be used, indicating the number of rounds to be fired.

a. "Single, aim, FIRE!" (One time and three motions). "Single," full cock; carry the first finger to the trigger. "Aim," extend the right arm straight to the front, elbow very slightly bent, and aim at the object, with the fore sight filling the notch to the top of the frame. "FIRE!" Pull the trigger and return to the position of "Pistol, draw."

b. *Single, snap, FIRE!*" Same as before (a), except that the object will be pointed at without running the eye over the sights.

c. "Double, aim, FIRE!" As before (a) except that the pistol will not be brought to the full cock.

d. "Double, snap, FIRE!" As before (c), except that the sights will not be used.

When the cautionary commands "Round," "Two," or "Three" etc., are given, all chambers will be emptied or the designated number of shots will be fired before returning to the position "Pistol, draw."

In pointing or aiming, the grip should be firmly, but lightly, grasped by the last three fingers and the thumb, the first joint of the thumb pointing slightly down. The shape of

the grip does not lend itself to extending the thumb nor to dropping the fourth finger under the butt; nor are such positions used by the best pistol marksmen. The pull upon the trigger should be made with the second joint of the first finger, and the direction of the pull should be directly to the rear. The elbow should be slightly bent, so that the recoil will come upon the muscles and not upon the braced bones of the arm. At the instant of pulling the trigger the grip of the hand and the muscles of the arm should be slightly tautened, to steady the pistol against the pull and the "flip."

3. "*Cartridges, LOAD!*" (One time and three motions).

1st motion. Carry the left hand in front of the body, left forearm pointing 45° to the right and slightly above the horizontal, palm of the hand up. Drop the piece into it, latch up, cylinder in the palm, barrel between thumb and first finger, muzzle 45° to the left and 45° below the horizontal. With right thumb unlatch cylinder; with second and third fingers of left hand turn out cylinder, pressing crane firmly back, first finger resting on barrel at joint of frame, and fourth finger on hammer. With left thumb applied to ejector rod head, slowly press rod home and hold it in that position while any cartridge cases that

have not fallen off are brushed aside by first finger of right hand. Allow left thumb to slip from rod head and rest on cylinder. Carry right hand to cartridge box and loosen catch. (In this motion, the muzzle should be depressed and the ejector worked slowly to avoid throwing out unfired cartridges when ejecting. In all cases, when loading, the muzzle should be depressed, or the cartridges may slip out before the cylinder is closed.)

2d motion. With the thumb and first finger of the right hand, take a cartridge from the box and place it in an empty chamber. So continue until all the chambers are loaded. With the right hand fasten the cartridge box flap, and grasp the grip of the pistol, finger clear of the trigger. With left thumb press cylinder home. Elevate the muzzle 45° above the horizontal. Release the thumb pressure, and with second and third fingers of left hand press back and upward on cylinder, thus rotating it, and at the same time testing the security of latching and the freedom of rotation.

3d motion. Resume position of "Pistol, draw." "Pack, LOAD!" Same as before, except *1st motion.* Drop the piece into the left hand with muzzle 45° above horizontal (so that empty cartridge cases will fall clear), and, in ejecting,

press the rod home smartly; then drop the muzzle to the loading position in "Cartridges, load." In ejecting under any circumstances the cylinder must be held fully open—the crane must be pressed firmly back—to allow the head of the case nearest the latch to pass by.

2d motion. With thumb and second finger of right hand take a pack from the box, first finger on plug head. (In withdrawing packs from cartridge box, seize the ring with the thumb and second finger, and turn the pack slightly to free it in the pack hole.) Place plug point in latch seat in ejector, lift first finger from plug head, and press on pack ring with thumb and second finger. Then proceed as in "Cartridges, load." In charging the cylinder do not turn the pack or in any way attempt to guide the cartridges. Enter the plug in latch seat and press straight down on ring, relieving pressure of first finger on plug head at the same time.

4. "*Return, PISTOL.*" (One time and two motions). "*Return!*" Drop the muzzle and enter it in the holster. "*PISTOL,*" thrust it home and fasten flap.

To charge packs. Place six cartridges in holes in pack charging block; inclose cartridge heads with pack ring; enter plug between cartridges; press plug gently to push cartridge heads to

seats, and then push plug home with ball of palm of hand.

V. BOAT DRILL.

The requirements of business and of civil employment compel Naval Militiamen to drill at night, when boat exercises are impracticable, or, at least, very unsatisfactory. Opportunity should be found, however, to give the men boat drill in squadron. A temporary signal book, containing the simpler movements of the fleet tactics, should be prepared, and the drill should be directed by means of signals made from a tug or launch, or from a pier or a vessel at anchor. Familiarity with the Navy numeral code and the use of answering pennants should be exacted.

The commands and the details of the drill in boats under oars as well as those under sail will be found in "Luce's Seamanship."

After the men have learned how to handle the boats they should be encouraged to get up boating parties to go off for pleasure jaunts. In no other way can men be so pleasantly, and at the same time so thoroughly familiarized with the handling of boats.

VI. GREAT GUNS.

Familiarity with and skill to manipulate great guns are absolutely essential to the efficiency of any naval organization.

The Naval Militiaman should endeavor as steadily to attain a proficiency in this branch of his duties as the National Guardsman labors to excel as an infantryman.

Now that the tacks and sheets of the man-of-war have been superseded by steam machinery, skill in seamanship has little to do with a crew's fighting efficiency. The best man-of-war's man of to-day is neither the active seaman nor the handy sailor, but the skilled marine-artillerist.

Most other drills in the Naval Militia should be made subservient to this. Every opportunity should be taken, not only to drill the men at the great guns, but to habituate them to taking their gun stations whenever they assemble. In no other way can the "ship's company" idea be so well taught. It is recommended that at every formation for parade, drill, exercise or inspection the men fall in at the guns—or at their gun stations, if there are no guns. Muster should then be held, the men answering not to their names, but to their gun numbers and by naming their respective stations. Thus, for example, at a 5 in. gun on a fixed pivot carriage, when the gun captain calls "number 3," the man of that number responds "first sponger" and elevator, second rifleman," and so on

through the crew. When the crews have been mustered they should be formed for inspection.

At the command "Form for Inspection," the first and second captains place themselves quickly in front of the columns of men on their respective sides of the guns. At the command "March" or the tap of the drum, the men on the left side of the gun, led by the gun captain, step off, and when near the midship line, execute column left; when the change of direction has been completed by all the men in the column, it halts, and the men face outboard, toeing the same seam from forward. At the same time, the men on the right side of the gun, led by the second captain, execute column right, and form on a seam immediately in rear of the gun and face inboard.

"If the ship be long and narrow, with but few guns, the men may be formed in one line, on "a seam near the midships, facing outboard."

The crews being formed for inspection the commands "*Draw*," "CUTLASSES," and then "*Present*," "CUTLASSES," are given.

The cutlass is carried to the front, point up, the hand as high as the neck and six inches in front of it, back of the hand and flat of the cutlass to the front, elbow close to the body, and blade inclined slightly to the front.

A careful and minute inspection of the uniforms and arms should then be made by the officers, and strict conformity to the regulations exacted. When a cutlass has been inspected, the wrist is turned outward, so as to show the other side of the blade.

The inspection being completed, the commands, *Stations, MARCH*, are given. At the preparatory command the men face to the left or toward their stations, and at the second command return to their stations, by reversing the method of forming for inspection. The command, "Leave your quarters" may then be given, and the men directed to fall in, in the formation appropriate to the prescribed drill.

It is believed that by this method not only do the men rapidly gain familiarity with the different gun stations, but that they become impressed with the fact that their normal formation for action or duty is that at the battery.

Men are dismissed from their gun stations at the command, "leave your quarters," at which they all touch their caps; on being "dismissed" from any other formation this salute is not rendered.

The deck force of a ship is divided, equally, into two watches, called respectively the port and the starboard watch. At sea, these watches are supposed to do duty alternately.

Thus, suppose that at midnight the starboard watch comes on deck; it will remain there, and do duty during the "mid watch," or from midnight to 4 a. m.; the port watch then stands the "morning watch," from 4 a. m. to 8 a. m.; the starboard then takes the "forenoon watch," from 8 a. m. to 12 noon; the port comes on for the "afternoon watch," from noon till 4 p. m. It will be seen that if this plan be followed further, and the day be divided up into six watches of four hours each, the starboard watch would again come on duty at midnight, so that the port watch would have "eight hours out" every night. To avoid this, and change the hours during which any particular man is on duty on two consecutive nights, the period from 4 p. m. to 8 p. m., is divided into two watches of two hours each, called respectively the first and the second dog watches. The port watch, now, having stood till 4 p. m., is relieved by the starboard, which stands the "first dog," from 4 p. m. to 6 p. m., when the port again comes on and stands the "second dog," from 6 p. m. to 8 p. m.; the starboard then stands the "first watch" from 8 p. m. to midnight, which thus brings the port watch on for the "mid."

No watches are stood by the crew in port, as all the ship's company (with a few exceptions)

are supposed to be on duty from "turn to" in the morning until "pipe down" at night. When a ship leaves port, all hands are called "up anchor" and both watches remain on duty until the anchors are up, the decks put to rights, and everything secured for sea, when the boatswain or his mate is directed to "pipe down," and immediately afterward to call "on deck all the — watch." The watch thus called comes on deck and takes the duty, and the standing of sea watches is begun.

The officer of the deck determines which watch to first call on deck, by reference to the quartermasters, who stand watch both at sea and in port, alternating from port to starboard. When the vessel goes to sea, therefore, the officer of the deck calls for the first duty, that watch to which the quartermaster then on duty belongs.

It will be seen that by this arrangement of watches one-half of the deck force is always on duty at sea, and it is this fact which governs the distribution of the men at the great guns. It is, of course, necessary that the watch on deck be able to work, temporarily, at least, all the guns on the threatened broadside. In a ship of ordinary type the facilities for berthing and accommodating men do not permit of carrying a full crew for every gun. It is therefore

provided that "each gun of the main battery whose arc of fire is practically the same on both sides of the keel is allowed a full crew; and also all shifting pivot guns. A gun and its opposite, on the same deck, each of which is on a fixed pivot and has its arc of fire limited practically to one side of the keel, constitute a pair, and have together one full crew." And "provision is made for manning all the guns by dividing the single crew stationed at a pair of guns"; but, "it is not thought that an effective fire could be long maintained by these divided crews unless they can be strengthened by supernumeraries."

This provision for manning all the guns is made by dividing the gun's crew into two equal parts, called respectively the first and second parts. At the modern guns the first part is composed of the odd numbers, and the second part of the even numbers; the odd numbers are taken from one watch and the even numbers from the other, so that whichever watch be on deck, every gun will have at least one "part," or one-half its crew there, and the gun can be worked temporarily and until the other watch can get on deck.

The commands and detailed instructions for the drill will be found in the "Gunnery Drill Book," which should be followed strictly.

All the details that it would be necessary to observe in case of action should, as far as practicable, be observed at every great gun drill. Thus, there should be a powder division, even if a few men have to be detailed to act as a skeleton powder division; blocks of wood, cartridge cases, passing boxes, or other objects should be selected to represent ammunition of different calibres, and care taken to see that the men understand the principles regulating the chains of supply, and that only those objects representing ammunition of the proper calibre are sent to any gun (see Ordinance Instruction, Sec. 50). So, a cot should be rigged, for sending wounded men below; tourniquets should be provided and used; firemen and pumpmen as well as riflemen and boarders should be called away and exercised; the rules laid down for the safety of the magazines should be observed; spare articles, such as fighting stoppers, rammers, etc., should be provided if on hand; belts and proper arms should be taken; the officers of the powder division should go to the cabin for the magazine keys; fire extinguishers should be provided; the well should be sounded, and, in short, every care be taken to teach the men exactly what they would have to do in case of an actual combat.

"When the individuals of a gun's crew have become expert in the performance of their particular duties, they shall be instructed in the duties of every other station at the gun."

DISTRIBUTION OF CREWS.

STATIONS OF CREWS OF

5-in., 6-in., and 8-in. B. L. R., on fixed pivot carriage. *(For a gun and its opposite on the same deck, the arc of fire of each being practically limited to one side of the keel. 12 men.*

Odd numbers on left side of gun, in numerical order, from "one," at the breach, to "eleven," near the ship's side; even numbers in similar order, on the right side of the gun.

Gun Nos.

Titles.

- 1.....First Captain, boarder.
- 2.....Second Captain, second rifleman.
- 3.....First sponger and elevator, second rifleman.
- 4.....Second sponger and elevator, boarder.
- 5.....First loader, boarder.
- 6.....Second loader, first rifleman.
- 7.....First trainer and pumpman, first rifleman.
- 8.....Second trainer and pumpman, second rifleman.
- 9.....First shellman, port guard.

- 10.....Second shellman, port guard.
- 11.....Powderman, second rifleman.
- 12.....Powderman, first rifleman.

STATIONS OF CREWS OF

4-in. and 5-in. R. F. Gun. (*For a gun and its opposite on the same deck, each of which is on a fixed pivot, and has its arc of fire practically limited to one side of the keel. 8 men.*)

For exercise, number one is stationed in rear of the breech; two to the left, and three to the right of the breech; four to the right of the breech and just inboard of number three; the other numbers are between number three and the scuttle.

Gun Nos.	Titles
1.....	First Captain, boarder.
2.....	Second Captain, first rifleman.
3.....	First loader, second rifleman.
4.....	Second loader, boarder.
5.....	Shellman, port guard, pumpman.
6.....	Shellman, port guard, fireman.
7.....	Shellman, second rifleman.
8.....	Shellman, first rifleman.

Nos. 1, 2, 3 and 4 should be the best men and most proficient marksmen in the crew. They will succeed to the command of the gun in the order named.

During the drill the distance and bearing of an imaginary target or enemy must frequently be called out, and the gun captains governed accordingly in directing the setting of the sights and the training. Occasionally, too, the command should be given to use shrapnel, and care should be taken to see that the gun captains (and even the crews) know where to obtain the necessary information as to the time of flight and how to cut the fuse to the proper time.

In training the guns, "the nature of the movement desired will be expressed by the words "quickly, handsomely.'" The order "well," will be used to stop the movement. There is no cautionary command "ready," and the gun captain may fire at any time after the command "well."

On assembling at quarters for inspection or general exercise, in port, the divisions man the starboard battery on the upper deck, and the port battery on the next lower deck. At sea they fall in at the weather guns.

VII. FIRE DRILL.

As soon as the ship's company is organized the Executive Officer prepares a fire bill, adapted to the particular arrangement of the vessel. This bill must contain full directions for extin-

guishing fire not only in case the men are not at quarters, when the fire alarm may be sounded, but also in case they are at quarters, in which case no fire alarm is permitted. This bill is kept posted in a conspicuous part of the ship, and not only the officers but the enlisted men should be thoroughly familiar with its provisions.

The fire alarm and the call to fire drill are given by a rapid ringing of the ship's bell, and, as soon as practicable, the music sounds to quarters, the bell ceasing as the drum starts. Frequently it is provided that a rapid ringing of the bell followed by a pause and one stroke shall indicate fire on the spar deck, if followed by a pause and two strokes, fire on the next lower deck, etc. At the same time the bugle may sound one blast to indicate fire forward; two, fire amidships; and three, fire aft; so that by means of the bell and the bugle exact information may be given as to the location of the fire.

At every fire drill both the steam hose and that leading to the hand pumps should be led out, and streams of water started through them as soon as possible. At every such drill all the precautions shall be observed that would be taken in case of actual fire.

Men must be detailed to batten down, and others to act as sentries over all the boat falls, and to go to them with fixed bayonets as soon as the alarm sounds, and allow no one to lower the boats or interfere with the falls without express orders directly from an officer.

CHAPTER V.

SHIP ROUTINE.

Generally speaking, books on naval subjects are intended for the use of those who have either had experience in the service or are to acquire it contemporaneously with the study of the book. For this reason, such books do not usually mention those routine matters which take place on shipboard during the ordinary uneventful day and which are sure to be observed by those actually in the service. In the Naval Militia organizations, however, experience has shown that it is the knowledge of these very "trifles" that it is most difficult to acquire. The men for whom this book is intended are not frequently aboard ship, where from actual observation they can acquire information about naval routine matters which are unimportant when known, but highly important when not known; and much of this chapter will therefore be devoted to endeavoring to supply information upon these points.

To attain this end and to give at the same time an idea of the day's continuous routine, the reader will be taken on deck at midnight

and kept there for twenty-four hours; but, since the routine in port differs from that at sea, it will be necessary to consider first

THE CASE OF A VESSEL IN PORT.

At midnight, the new officer of the deck comes on the quarter-deck, and approaching his predecessor says, "I am ready to relieve you, sir," and both salute, the junior saluting first. (The reason for the prohibition of salutes after sunset not applying to cases on shipboard, the prohibition itself is not strictly regarded there, and, in practice on board naval vessels, hand salutes are given and returned at night just as they are during daylight.) The officer whose watch is finished then replies, "Very good, sir," or something to that effect, and then gives to his relief information substantially as follows:

1. "We are at anchor off —"; care must be taken to give the new officer of the deck full information as to the place of anchorage, and if the ship's position in the harbor has been changed within the preceding day or so, that fact should be mentioned.

2. "The — (port or starboard) anchor is down, "and there are — fathoms of chain out." The officer of the deck must know these facts, so

that, in case of the ship's dragging or becoming uneasy at her anchor he may be ready to act promptly, or to make an intelligent recommendation to the commanding officer, as to veering more chain or letting go another anchor. If both anchors are down, the report should include a statement of which is up stream or to which the vessel is riding and whether the mooring swivel is on, and in fact whatever information may be necessary to enable the new officer of the deck to keep a clear hawse when the vessel next swings.

3. "We are in — fathoms of water."

4. "The tide is running — (ebb or flood), and "will turn at about — o'clock."

5. "The wind is — (direction) and its strength is —."

6. "The barometer is — (height), and is — (rising or falling)."

7. "The weather indications are —."

The necessity for giving the officer of the deck this information is apparent. Particular care must be taken in turning over the information about the barometer and the weather, as upon these the officer of the deck must decide what precautions are to be taken during his watch. Usually, as soon as the ceremony of relieving is completed, the officer of the deck will ex-

amine the log, and particularly the meteorological observations for the preceding watch, and familiarize himself with the state of the weather.

8. "The Commanding Officer is — (on board "or ashore), and the Executive Officer is — (on "board or ashore)." These facts must be communicated to the officer of the deck so that he may know who is actually in command, and to be called upon in case of emergency. If the Captain be ashore there should be a light at the peak to indicate that fact. Frequently the report will include a statement that there are so many officers and so many enlisted men ashore; and in case officers are ashore the quartermaster is directed to keep a bright lookout for them, so that their approach may be observed in time to have lights carried to the gangway. The "liberty book" will always show what enlisted men are ashore, but different methods are adopted for keeping information as to the absence of officers. Usually, a board containing a list of the names of all officers attached to the ship is hung up near the post of the cabin orderly, and is provided with pegs or other movable appliances indicating which officers are on board and which are ashore. The orderly then sees that the proper indication is given

from the board and makes the necessary changes whenever officers leave or return to the ship.

9. "The orders are to do so and so during "the watch."

10. "The order book is — (where)." This refers to the Commanding Officer's order book, a small note book in which he writes orders to be carried out during the night.

11. "The anchor watch are in such and such "places." This will be referred to later.

12. "The drift lead is (or is not) over." The drift lead is a lead lowered to the bottom, when the ship is at anchor. A hand (the quartermaster or one of the anchor watch) is kept by the lead line at night, if there be much wind, so that he may tell by feeling the line whether or not the ship is dragging.

13. "There are so many prisoners confined in "the brig (or wherever the place of confinement "may be)."

14. Such and such boats are lowered and are at the boom, or as the case may be.

15. Any additional information that may be useful during the watch.

The relieving being completed, the new officer of the deck will visit and inspect the upper decks (he is not supposed to leave the upper deck except in case of some extraordinary emer-

gency), to see that all the men on watch are at their stations and alert. It will be convenient to follow him in this tour, and learn what men are on watch, where they are stationed and what their duties are.

First—He will find aft at the cabin door the orderly, and, if the ship be a flag ship, there will probably be one orderly at the door of the Admiral's and one at the door of the Commanding Officer's cabin. This orderly is a private, specially detailed for that duty from the marine guard. (In Naval Militia organizations the duty will be performed by a seaman). Usually the four neatest privates in the guard are selected as orderlies, and they stand orderly duty in four watches, and perform no post duty.

Roughly speaking, the duties of the orderly are three-fold.

(a) To guard the cabin, and see that no unauthorized person enters it. The cabin servants are allowed to enter, as are also the gig's crew, who usually assist in the care of the cabin. If an officer (other than the Executive Officer) desires to see the Commanding Officer, he first sends in his name by the orderly. If an enlisted man desires to see the Commanding Officer (or if he has any request or complaint to make), he "goes to the mast," that is to the gangway

abreast the mainmast, or, where the mainmast is not at the forward end of the quarterdeck, he goes to the forward limit of that deck and stands at attention until the officer of the deck approaches. (He will go to the starboard side of the mast if in port, and to the weather side if at sea.) As the officer of the deck approaches, the man salutes and makes known his request. If he desires to see the Commanding Officer he states fully the subject about which he desires to see him. The officer of the deck then sends the messenger to inform the Executive Officer of the man's request, and the Executive notifies the Commanding Officer. If the Commanding Officer decides to see the man, he comes out and sees him at the mast.

(b) The orderly's second duty is to carry messages to and from the Commanding Officer. Any message to be sent to the Commanding Officer is sent through the orderly; a message to any other officer should be sent by the messenger (generally an apprentice boy, two of them being detailed to this duty, and one of them required to be on the quarterdeck, or near the officer of the deck from "all hands" in the morning to "pipe down" at night). The orderly is supposed to be always at hand to answer the cabin bell, and should not be sent away from

the quarterdeck, except by the Commanding Officer.

(c) His third duty is to watch the ship's clock and report to the officer of the deck whenever it is time to give any routine order or perform any routine evolution. He reports to the officer of the deck every half-hour, so that the bell may be struck. The system of indicating time by "bells" is as follows: The bell is struck every half hour; the day is divided up into six periods of four hours each, and when the end of one of those periods is reached, the number of bells to be struck commences at "one" again, so that eight bells is the highest number ever struck. Thus, "one bell" is half-past 12 o'clock; two bells, 1 o'clock; three bells, half-past 1; four bells, 2 o'clock; five bells, half-past 2; six bells, 3 o'clock; seven bells, half-past 3; and eight bells, 4 o'clock. The count then begins over, one bell being half-past 4; two bells, 5 o'clock; and so on up to eight bells, 8 o'clock, when the count again goes back to one bell, and so on, through the day.

The orderly, then, reports every half-hour to the officer of the deck, who immediately causes the proper number of bells to be struck (by the messenger during the day, and by the orderly at night). Bells are struck both day and night,

care being taken, however, to strike them very softly after "pipe down" at night. There are three times during the day, however, when the officer of the deck does not strike the bell until the Commanding Officer has been notified of the time and has directed that the bell be struck. These times are 8 a. m., 12 noon, and 8 p. m. At these hours the orderly will report to the officer of the deck "8 (or 12) o'clock, sir." He is then directed to make the same report to the Commanding Officer, who replies "make it so," and the bell is struck. Except on these three occasions, however, the orderly reports, not the time, but the number of bells to be struck. At 7:30 a. m. the orderly will report "seven bells, sir," but half an hour later he reports not "eight bells," but "8 o'clock, sir."

Besides reporting the bells to the officer of the deck the orderly reports to him whenever it is time to perform any duty called for by the routine. A copy of the routine is attached to a board and hung up near the orderly's post by the cabin door, and from this he is enabled to tell when to make his reports. The following is a copy taken from the orderly's board on the Philadelphia:

ORDERLY'S ROUTINE.

He will report the following times to the officer of the deck:

3:00 a. m. Call ship's cook.

3:50 a. m. Call relief.

10 minutes before reveille.

10 minutes after sunrise,

turn off spar deck circuit.

6:50 a. m. Hammock stowers to nettings.

7:00 a. m. Up all hammocks.

7:20 a. m. Captain's orderly will ask Commanding Officer what is to be the uniform of the day.

7:50 a. m. Mess gear; call music.

7:55 a. m. First call for colors.

8:00 a. m. Colors, breakfast.

8:20 a. m. Call relief.

8:45 a. m. Turn to. Clean brightwork.

9:20 a. m. Stop brightwork. Sweep down.

9:25 a. m. Preparatory call to quarters.

9:30 a. m. Quarters and drill.

10:15 a. m. Secure from drill.

11:00 a. m. Ship's cook to mast.

Instruction of apprentices for one-half hour.

11:30 a. m. Sweep down; haul out awnings when spread. Take down towel line.

11:50 a. m. Mess gear.
 12:00 noon. Dinner.
 12:20 p. m. Call relief.
 1:00 p. m. Turn to, sweep down, etc.
 1:10 p. m. Call to afternoon drill.
 1:30 p. m. Sound provision call.
 2:00 p. m. Secure from drill.
 2:30 p. m. Get up coal for galley.
 3:50 p. m. Call relief.
 4:00 p. m. Sweep down, etc.
 4:20 p. m. Trice up awnings.
 4:50 p. m. Mess gear.
 5:00 p. m. Supper.
 5:25 p. m. Preparatory call to quarters.
 5:30 p. m. Turn to. Evening quarters. After
 quarters, sweep down. One-half
 hour before sunset, turn on spar
 deck circuit.
 7:50 p. m. Call relief.
 8:30 p. m. House all awnings if they are not
 furled.
 8:50 p. m. Call music.
 8:55 p. m. First call for tattoo.
 9:00 p. m. Pipe down.
 11:50 p. m. Call relief.

(It should be stated here that where two or
 more vessels are in port, all evolutions, striking
 of bells, etc., should conform to what is done on
 the senior vessel.)

These, then, are the three general classes of duties performed by the orderly. But he also performs many miscellaneous duties not coming under any one of these classes.

Thus, as already mentioned, he frequently keeps the officers' board, showing which officers are on board ship and which are not. So he frequently takes the meteorological observations, every hour, and enters them in the log, under the direction of the officer of the deck.

The orderly wears his belt and bayonet during his tour of duty, keeping the bayonet in the scabbard. He is not allowed to sit down while on duty. Being under arms he does not uncover but keeps his cap on, even when in the cabin or in the presence of officers uncovered. He salutes with the hand whenever an officer passes or addresses him.

Second—The officer of the deck having seen that the orderly is at his post will, we will suppose, pass forward on the starboard side of the spar deck for his proposed tour of inspection. The next person he will encounter will probably be the Quartermaster of the watch. The duties of the Quartermaster are given at length in the chapter on petty officers.

The Quartermaster of the watch will probably be on the bridge, though this will depend on the

construction of the vessel; sometimes he stands his watch on the poop, but usually the Commanding Officer does not permit any tramping around over his head. The Quartermaster must, however, stand his watch in some elevated position, where he can have a clear, uninterrupted view around the ship and be able to observe the approach of vessels or boats.

Third—Passing forward now the officer of the deck will probably next encounter a sentry. This man will be detailed from the marine guard, if there be one, but, in the case of Naval Militia organizations, will be a seaman.

The practice generally followed in selecting men for duty as sentries is as follows: Suppose that there are four "posts" in the vessel; that is, that there are four places where it is necessary that a sentry be posted. These positions will vary with the kind of vessel, but, roughly, they would be:

Post I.—The to'gallant forecastle.—The limits of the post would be the head and the break of the forecastle. The sentry on this post would be equipped with a belt and bayonet, and armed with a rifle.

The sentries posted between decks cannot conveniently carry rifles and so are armed with only the bayonet. The duties of the sentry on

any particular post will be so varied by circumstances that it is impossible to give exact rules on the subject; but, whatever his duties may be, they will be written out and pasted on a small "sentry board" or "order board" kept near his post. When he goes on duty this board will be delivered to him, and the man who precedes him will tell him in a general way what the orders are. When he has looked about his post and made himself familiar with what is going on he should take the sentry board and make himself thoroughly familiar with the orders. He may then, from time to time, look at the board, and assure himself that he is familiar with his orders so that on going off post he may correctly turn them over to his relief.

Some of the general duties usually mentioned on the "Post I, Sentry Board" are: (a) Present arms to all men-of-war passing; also to the colors, when hoisted or hauled down. (b) Salute all officers (of whatever ship or nationality) passing in boats. (c) Challenge (by hailing "boat ahoy") all boats approaching the ship after dark, and report the answer to the Quartermaster. For instance, if, after dark, a boat approaches the ship coming from forward the beam, the sentry will hail her with "Boat ahoy"; if she comes from abaft the beam the Quarter-

master being nearer her, will probably hail her himself; but if, at night, either the Quartermaster or the sentry notices an approaching boat that the other has failed to hail, he must himself hail her before she approaches too close to the ship. The sentry now, having hailed the boat, let us suppose the reply to be "aye, aye," then the sentry, without leaving his post, will report in a voice sufficiently loud to be heard by the quartermaster, "aye, aye, Quartermaster." The Quartermaster, in turn, reports the answer to the officer of the deck who sees that lights are provided and proper preparations made to receive the approaching officer. To allow sufficient time for these preparations the sentry must hail an approaching boat as soon as she can be distinctly seen and is well within the range of his voice. (d) Permit no enlisted men to lounge on the starboard side of the fore-castle in port, nor on the weather side at sea, nor to sit on the rails or guns. (e) Allow no boats to be entered or lowered after sundown, except by special permission.

All men on sentry duty should take special care to see that they are neatly dressed in the uniform for the day and that their arms and accoutrements are clean and in order. While on duty they should preserve a military bearing,

and refrain from talking and lounging. The piece should be carried accurately in some position prescribed by the manual of arms, but may be shifted at will from one position to another.

Post II.—Under the to'gallant forecandle.—This post extends from the manger to the break of the forecandle. If the scuttle butt be under the to'gallant forecandle as is frequently the case, this sentry will have special charge of it. If it be not there, a sentry will usually be posted over it. Some of the orders for the sentry or Post II will be: (a) See that no water is wasted at the scuttle butt and none taken away without authority. (b) Allow pipes to be lighted from the smoking lamp only, and permit no smoking except when the smoking lamp is lighted. (c) Keep the starboard side clear during the day. At sea, allow none of the watch on deck to loiter under the to'gallant forecandle. (d) Allow no men to sit in the ports or on the guns; and see that men do not lounge against paint work.

Post III.—In front of wardroom door.—The wardroom is the quarters allotted to the commissioned officers above the rank of Ensign (except the Commanding Officer, who lives in the cabin). The limits of this post will depend on

the construction of the ship, but usually the beat will extend from the wardroom bulkhead to the engine room bulkhead. As a rule, the junior officers' quarters are situated just forward of the wardroom, extending along on each side of the ship, so that the beat of this sentry will be between the port and the starboard quarters, in the space called the "steerage country," and this sentry can keep an eye on the quarters of the junior officers as well as on the wardroom. Generally, too, the hatches leading to the after storerooms, wine lockers and provision rooms will be in the steerage country, so that this sentry can guard the stores. The arrangement of posts is generally such that one sentry is posted near the provision hatch. Usually, too, the arm-racks are near this beat. The orders for this sentry will be: (a) Allow no one but duly authorized persons to interfere with the arms or accoutrements. (b) Permit no one, except officers or their servants or persons on duty, to enter the wardroom or the junior officers' quarters. (c) Permit no enlisted men to go down the provision hatches, except petty officers in charge of storerooms, and those specially authorized.

Post IV.—The brig.—Prisoners are usually confined in the brig, or in very hot weather on

the deck, by the hatchway nearest the brig. The duties of the sentry on this post will be: (a) To take charge of all prisoners, inside or outside the brig. (b) Allow no one to hold any conversation with the prisoners, except the police force of the ship and those having special authority. (c) Allow no prisoners to be released or taken away from the brig except in the presence of the Corporal (or petty officer) of the Guard.

Besides these orders, which are special orders to sentries on particular posts, there are "general orders to sentries," which are also written and pasted on the sentry board, but which apply equally to all posts and which a sentry is not required to repeat to his relief, as all the members of the guard are supposed to be familiar with them. These general orders usually are as follows:

(a) Be alert and vigilant, observing everything that takes place within sight and hearing of the post.

(b) Prevent lounging.

(c) Salute all passing officers.

(d) Make frequent visits to all parts of the post.

(e) Hold no conversations except in the line of duty.

(f) Do not leave the post without being regularly relieved by or in the presence of the Corporal (or petty officer) of the Guard.

(g) Prevent all smuggling of liquor, gambling, boisterousness, unnecessary noise, quarrelling, fighting and all other irregularities.

(h) In case of any disturbance not readily suppressed, or of any unaccountable or suspicious noise, or of fire, pass the call at once for the Corporal (or petty officer) of the Guard, and whenever he is called add the number of the post. (Thus, the sentry on Post I wanting the Corporal of the Guard, sings out "Corporal of the Guard, Post One.")

(j) Allow no smoking out of the designated places, and none out of the proper hours except when special permission is granted.

(k) Allow no one except the police force or the lamp-trimmer; to interfere with standing lights. (The police force of the ship consists of the masters-at-arms and the members of the guard on duty).

(l) Each sentry will turn over the sentry board to his relief, and the sentry on post will be held responsible for the condition and safe keeping of the board.

We have now gone with the officer of the deck as far as the to'gallant forecastle, where

he found the sentry on "Post I." Coming down from there, he will find under the to'gallant forecastle the sentry on "Post II." The space under the to'gallant forecastle is used as berthing space, so that he will find hammocks swung there.

Fourth—Passing aft, in the port gangway, he will next encounter the "Corporal of the Guard," or, in case the guard is composed of seamen, instead of marines, the "petty officer" of the guard.

If there be four posts, twelve men will be detailed for the day's guard duty. These men will be divided (by the marine officer or the sergeant of the guard) into three reliefs of four men each, known respectively as the first, second and third reliefs. The first relief usually goes on post at 8 a. m., and the other reliefs follow successively, each sentry remaining on duty two hours, so that each relief will have two hours on duty and four hours off. The first relief then having gone on duty at 8 a. m., the Corporal of the Guard will assemble the second relief, a few minutes before 10 a. m., in some convenient place (usually the port gangway, just forward of the quarterdeck), and, after inspecting the men and making sure that they are in condition for post duty, and that their uniforms,

arms and accoutrements are in order, will either march the entire relief around to the different posts in succession, or will call out in succession the men intended for duty on different posts and march them separately to their stations. Which of these courses he will adopt will depend on the location of the different posts and other conditions, but generally, in consequence of the lack of sufficient space for marching a squad of men about the decks, it will be found more convenient to take each man to his post in succession. Thus, the Corporal having inspected the relief, commands "Fall out, No. 1." at which the man detailed for duty on Post I steps to the front and is marched to his post, where he relieves his predecessor in accordance with the rules laid down in the regulations for guards and sentinels. The Corporal sees that the relieving is carried out properly, and that the orders are turned over and understood. Then, returning to the squad, he proceeds in the same way to see the sentries on the other posts successively relieved.

When the time arrives for putting the first relief on duty again, that is, at 2 p. m., the men are put back to duty on the same posts that they occupied from 8 a. m. to 10 a. m., so that each post will have on duty a man already acquainted with the orders to be observed there.

By this arrangement, it will be seen, each man in the day's guard stands eight hours post duty during the day. There will be two or three non-commissioned officers detailed to duty as Corporals of the Guard who will take the duty successively, in tours of four hours each. The next day the non-commissioned officers and men in this guard will be off duty and excused from everything but drills. If liberty be granted, all those entitled to it will be permitted to go on shore. The duties of the Corporal of the Guard include the following matters:

1. Visit the sentries, prisoners and lights every half-hour (that is whenever the bell is struck) from sunset to sunrise, and report to the officer of the deck the result of each visit.

2. Search all enlisted men returning on board, except non-commissioned officers of marines and members of the master-at-arms, mess.

The Corporal of the Guard when not actually going about the ship inspecting, remains in the port gangway (the lee gangway at sea) just forward of the quarterdeck, and within easy call of the officer of the deck.

Fifth—The next men to be encountered by the officer of the deck on his round will be the anchor watch, "a small number of men kept on "duty at night, while the ship is in port, to be

"in readiness to do any duty that may required, especially to let go an anchor, veer cable, hoist head sails, set spankers, or to man-a boat." There are usually five men in the anchor watch, one from each part of the ship, though the number is increased whenever circumstances require it. Between 8 p. m. and 9 p. m. the word is usually passed, "Lay aft the captains of parts of the ship and give in the names of your anchor watch." The captains of parts of the ship of both watches lay aft and give to the officer of the deck the names of the men who are to do duty in the night's anchor watch.

These names (ten in all) are usually entered by the officer of the deck in the margin of the rough log. At 9 o'clock, or "pipe down," the word is passed, "Lay aft the anchor watch to muster." The ten men detailed for the duty then form on the port side of the quarterdeck and are mustered by the officer of the deck. Let us suppose that the five men in the starboard watch are to do duty as the first anchor watch (the port watch would then have the first tour the following night), the man detailed from the starboard forecastle will then, after muster, be sent with the man from the port forecastle to learn where the latter's hammock is swung, and so each man in the first anchor

watch learns the swing of the man in the same part of the ship who is to be in the second anchor watch. Then all the second anchor watch are allowed to turn in while the five men in the first anchor watch (in this case, the star-board watch) come aft to the quarterdeck and perform such duties as may be assigned them. Frequently, if there is nothing going on, and the ship is riding easily, all of them are permitted to bring their hammocks aft and turn in on the port side of the quarterdeck. More frequently one of the anchor watch is kept awake to stand by the drift lead, or to hold a light in case officers return to the ship. The men whose services are not actually required are, however, permitted to make themselves comfortable, or if they desire it, to turn in, under the eye of the officer of the deck, where they can be turned out quickly in case of necessity. This anchor watch stays on duty from 9 p. m. to 1 a. m., when the men in it are permitted to go to call the reliefs who were mustered with them at 9 p. m. Each man calls his relief and comes aft with him, and reports to the officer of the deck that the relief is ready for duty; he is then permitted to go below and turn in, while the second anchor watch takes the duty, and is disposed of as the first was at 9

o'clock. The second anchor watch remains on duty from 1 a. m. until all hands are called.

Returning again to the officer of the deck:—Coming aft on the port side of the quarterdeck on his tour, he will find there the five men in the anchor watch, disposed of as he or his predecessor may have directed.

These are the only men who will usually be found on duty on the upper deck (unless there be an officer of the forecastle or junior officer of the watch on duty), and the tour is now completed. In the engine-room and fireroom there will be enough petty officers and men of the engineer's force on duty to attend to whatever may be going on there. Usually, of course, in port, there will be but little going on in the engineer's department, but there will probably be steam on the distilling boiler, and the electric light plant, if there be one, will probably be in operation.

The officer of the deck being now back at his station on the quarterdeck, we will go with him through the routine of his watch.

Referring to the "Orderly's Routine," page 70, we find that the first thing to be reported is at 3 a. m. Of course, in the mean time the orderly has reported at every half-hour that it was time to strike the bell, and the bell has

then been struck and the Corporal of the Guard has made his half-hourly reports. When the orderly reports six bells, either he or the Corporal of the Guard (probably the latter) will be directed to call the ship's cook. He must be called at this time so that he may have the galley fire started and water heated and be ready to serve out coffee when all hands are called.

At 3:50 the orderly reports "ten minutes to four, sir," and either he or the Quartermaster is sent below to call the relief officer of the deck. Word is always sent to the relief officers ten minutes before they are to come on watch; during the day they are merely notified of the time, so that they may be in uniform and ready to take the deck promptly on the stroke of the bell, but during the night the orderly or Quartermaster calls them, and puts lights in their rooms, so that they may dress and get on deck by the time fixed for relieving. At 3:50 the relief junior officer of the watch, quartermaster, corporal of the guard and orderly are called and go on duty at 4 o'clock.

The orderly's next report is "ten minutes before reveille," reveille usually being at 5 or 5:30 o'clock. When this report is made the Boatswain's Mates, hammock stowers and "music" are called. When the hour arrives, the music

sounds reveille and the Boatswain's Mates call "all hands" and "up all hammocks." At this call, all hammocks, except those known as "six bell hammocks," must be lashed, brought on deck and stowed in the nettings. What are "six bell hammocks" will depend on the orders in force on that particular ship. Generally speaking, however, all men who have had duty during the night will be allowed to sleep in till six bells (7 o'clock), so that orderlies, sentries, Quartermasters and members of the engine-room force who have been on duty during the night, the men in the anchor watch, and any boat's crews that have been out of the ship since pipe down, are allowed to sleep in. The other men are allowed in most ships eight and in others ten minutes for getting their hammocks lashed and on deck. The Boatswain's Mates and Masters-at-Arms pass around among the hammocks, hurry the men up, and see that none but six bells hammock men are allowed to sleep in. While the hammocks are being lashed and stowed the mess cooks go to the galley and get the coffee for the men in their respective messes. Coffee is then served out without special orders, and the men are allowed a half-hour after reveille for the lashing of their hammocks, washing themselves and getting

their coffee and a smoke. Supposing all hands to have been called then at 5 o'clock, it will be time at 5:30 to turn the hands to.

In the mean time the officer of the deck will have familiarized himself with the "morning orders." These orders relate principally to the scrubbing and cleaning which are always done in this watch. They are generally written up every night by the Executive Officer, and the "morning order book" is delivered to the officer of the deck or left in the Executive Officer's office. In some cases, however, a regular cleaning schedule is in force, which fixes the morning watch routine for every day in the week, and in such cases the officer of the deck will of course follow the routine unless there are special orders to the contrary. The routine for morning watch cleaning in force on the United States Ship Philadelphia is as follows:

ROUTINE FOR MORNING WATCH.

Sunday.—Wash down deck. Clean ladders and brightwork.

Monday.—Wash clothes. Scrub (with sand) the decks, ladders, gratings in boats and on boat skids, and the forward accommodation ladder. Sweep and clean inside of cowls of ventilators.

Tuesday.—1st of month, scrub hammocks; 2d of month, scrub cots; 3d of month, scrub hammocks; 4th of month, scrub cots and bags. Scrub, with sand, decks and ladders.

Wednesday.—Wash clothes, mattress covers and blankets. Scrub, with sand, the decks, ladders, gun gear, gratings from forward and after passage. Clean grab ropes, pendants and jacob's ladders. Scrub ice chests.

Thursday.—Scrub, with sand, the decks, ladders, hatch gratings, hatch bars, oars, mess benches and tables and gratings from midship torpedo room.

Friday.—Wash clothes. Scrub, with sand, the decks, ladders, mess tables, benches and chests, scuttle butt and harness cask; scrub deck cloths and cloths from lower decks.

Saturday.—Scrub and holystone decks, oars, gun gear, capstan bars, hatch gratings and hatch bars, flying deck of ordnance workshop and after torpedo room. Scrub ice chests.

Daily.—Clean paint work. Boat keepers clean boats. Wash out ash chutes with hose. Clean ship's side. Follow motions of flag ship in regard to awnings.

Note.—If the weather is favorable, bedding will be aired at 9 a. m. on Saturdays.

The hands being turned to half an hour after

reveille, the morning watch routine will be carried out, care being taken to see that the squilgeeing and drying down of the decks are started in sufficient time to permit of their being finished by 8 o'clock.

At 6:50 the orderly reports the time, and the hammock stowers are sent into the hammock rails. The hammocks, which came up at all hands, were stowed rapidly and it may be necessary to restow them; or boat keepers and Coxswains may have passed over the rails in getting in or out of their boats, so that the line of hammocks will require some straightening up. For these reasons the hammock stowers are sent to their respective nettings to get them in order before six bell hammocks are piped up. Then, when the orderly reports six bells, the word is passed "Up all hammocks," at which all the men who have been allowed to sleep in turn out and lash their hammocks and get them on deck; the only hammocks permitted to remain below after six bells are those in the sick-bay. When the six bell hammocks have been stowed the hammock cloths will be hauled over, or rolled back or triced up, as may be determined by the usual routine and the state of the weather.

At 7:20 a. m. the orderly asks the Command-

ing Officer for orders as to the uniform to be worn by the crew during the day. The uniform to be selected will be determined principally by the state of the weather and the work in which the crew is to be engaged during the day. The uniform orders having been given, the proper uniform is indicated on the "dress board," which the crew must consult, in order to avoid the noise incident to passing the word. If there be more than one ship in port, the senior usually hoists the uniform signals at about 7:30 a. m., and the other ships conform to the prescribed uniform unless specially excused. The men do not shift into the prescribed uniform as soon as the order is posted, but do so during the breakfast hour, that is, between 8 and 8:45 a. m., so that they may be in proper uniform and ready for duty at "turn to."

At 7:50 the orderly reports the time and the "messenger," who will have reported on the quarter-deck for duty immediately after all hands are called, will be sent to call the music on deck. At the same time the Boatswain's Mates will be directed to "pipe mess gear" and the mess cooks will get their cloths spread or tables rigged, and be ready to serve out breakfast ten minutes later.

At 7:55 the music, being on deck, is directed to

sound the "first call." The Quartermaster stands by the colors, and if the jack is to be set, a hand is sent out to stand by it. In the mean time the officer of the deck will have sent the messenger to ask the Navigator if the chronometers are wound. The importance of keeping the chronometers wound is apparent, and to avoid any possible oversight, the inquiry on this subject is made every morning. Then when the orderly reports "8 o'clock, sir," he is directed to "report to the Commanding Officer, "8 o'clock and chronometers wound." The Quartermaster stands by the colors, the messenger by the bell and a hand by the meal pennant, while the music prepares to sound off. The orderly reports to the Commanding Officer, who replies, "make it so"; the orderly reports to the officer of the deck, who orders "strike eight bells, sound off, pipe to breakfast." Of course if there be a flagship in port she will be followed in these matters. In that case, when the orderly reports to the Commanding Officer "8 o'clock," the reply will be, "make it so with the flag ship." On the other hand, if the flag ship strikes eight bells before the report, has been made to the Commanding Officer, the officer of the deck at once commands, "strike eight bells, sound off" etc., and then

directs the orderly to report to the Commanding Officer that eight bells has been made with the flagship and that the chronometers are wound.

From 8 a. m. to 8:45 a. m., the men are not called on for any work except in cases of emergency. No boats are sent away and the smoking lamp is lighted. The Quartermasters, signalmen and sentries who are to go on duty at 8 a. m. are allowed to get their breakfasts and smoke between 7:30 and 8.

Usually during the morning watch the Executive Officer will take the deck for a time, relieving the officer of the deck, who thus gets an opportunity to get washed and shifted into appropriate uniform by 8 o'clock. This officer of the deck, who came on duty at 4 a. m., is not regularly relieved until 8:30. The wardroom breakfast beginning usually at 8 o'clock, the relief is allowed the extra half-hour for his breakfast. He is notified when it is 8:20, and at 8:30 he takes the deck.

At 8:45 the Boatswain's Mates pass the word "turn to," and at this the meal pennant is hauled down, the smoking-lamp is put out, the mess gear is stowed away and the men are supposed to be in the uniform of the day and ready for work. The word is then passed (or the call sounded) to clean brightwork, and the men de-

tailed to look out for deck and gun brightwork see that it is polished. In the mean time the men not cleaning brightwork are, under the direction of the Boatswain's Mates, putting things to rights, stowing away boxes, bags, towels and wash deck gear; having loose pieces of clothing stowed away; wiping up spots on the deck; hauling taut the gear; straightening out the hammock cloths; squaring yards, if necessary (though yards are generally squared in the morning watch), and in general getting things shipshape and ready for quarters.

At 9:20 the cleaning of the brightwork is stopped, the cleaning gear stowed away, and the Boatswain's Mates pipe "sweep down."

At 9:25 the preparatory or warning call to quarters is sounded, and at 9:30 the call sounds or all hands are called to quarters. The men actually on duty do not leave their posts; the others fall in quickly at their gun stations and are mustered, formed for inspection, and their uniform and arms minutely inspected. The gun brightwork is also carefully examined. The muster and inspection being completed, the reports having been made to the Commanding Officer and the retreat sounded, the divisions are given such drills as are prescribed by the drill routine or specially ordered. At the close of the

drill period "Secure" is sounded and the arms are then put away, the divisions dismissed and the men go about the work of the day.

At 11 a. m. the ship's cook is called to the mast with a sample of the dinner preparing for the men, which is tasted and inspected by the officer of the deck.

At 11:30 the decks are swept down, towels and clothes are taken down if dry, and if the awnings have been triced up to let the deck dry, they will be hauled out—that is, spread.

At 11:50 mess gear is spread and at 12 the crew is piped to dinner. As before, the men going on watch or duty at eight bells get their dinner and smoke at seven bells. All work ceases and the smoking lamp is lighted and the meal pennant hoisted during this and all other meal hours.

The relief officer of the deck is allowed the extra half-hour for luncheon and does not take the deck until 12:30. The hands are not turned to until 1 o'clock, the men being allowed three-quarters of an hour for breakfast, an hour for dinner and a half-hour for supper.

At 1 p. m. turn to and sweep down. At the prescribed hour afternoon drill is held. During the afternoon the pay department will prepare to issue provisions, and at the sounding of the

ards and bring off men who have had night liberty; another boat called the "market boat" is sent ashore in time to bring off the cooks and stewards with fresh provisions and milk for 8 o'clock breakfast. Another boat is usually sent in time to return to the ship just before quarters; another leaves the ship just after 1 p. m., that is, after the officers' luncheon; another, called the "dinner boat," is sent off in time to bring officers on board just before their dinner hour; another usually goes ashore just after the officers' dinner, while still another goes ashore at a suitable hour to bring off the theatre parties. In taking passage in the ship's boats the enlisted men not at the oars will, if there are officers in the boat, occupy the fore-sheets.

Soon after the ship gets in port, a "boat time table" is published, showing the hours at which the different boats will leave the ship, it being understood that a boat always returns to the ship immediately after her passengers are landed; some warning is usually given before the boats leave the ship. One method of doing this is by striking the engine room bell or gong once five minutes before boat time, and twice when the boat is ready to shove off.

Circumstances, such as the distance to the

landing, the presence of surf, the facilities for landing, the direction of prevailing winds, the climate, etc., will dictate what boats are to be selected as running boats. Some Commanding Officers prefer to run the steam launches whenever practicable, so as to save the men from work, and this is specially desirable in hot countries or fever districts; other Commanding Officers prefer to leave the steam launches in the cradles and use the cutters, so as to give the men plenty of practice in handling the boats under sail and under oars.

Generally those boats used for carrying passengers will not be used for carrying stores, and great pains will be taken to see that they are kept clean and in good condition. The Dinghy is generally used as a market boat unless the steam launch is running, in which case the stores are brought off in her.

No man should be permitted to go into a running boat unless he is in the proper uniform. Where a running boat's crew is selected for the day's duty the boat officer should muster and inspect the crew early in the morning, and afterward should inspect them in the boat prior to making any trip. The running boat's crew, if one be detailed, will be excused from all other duty for the day, and will be kept in clean

men in the watch about to be relieved. In such cases the watch is said to "lash and carry."

Now to revert to the relieving of the wheel and lookout. The men on these posts are selected from the watch actually on duty. The number of lookouts posted will depend on the class of ship, her whereabouts and the state of the weather. The number of men at the wheel will depend on the state of the sea and the kind of steering gear. If the ship be on soundings there will probably be one or two men in the chains (i. e. heaving the lead) and this will certainly be so if the ship is on soundings and the weather is foggy. So, more lookouts are posted in foggy than in clear weather. (Always when under way and if necessary, when at anchor, a lookout will be stationed aloft during the day. At night so many lookouts shall be stationed as are necessary). Generally there are lookouts (at night) as follows:

1. On the starboard side of the forecastle, near the cathead. The principal duties of this lookout are to see that the starboard running light, and the white masthead light, if carried, are kept burning brightly, and to carefully scan the horizon, and observe and report at the earliest possible moment any vessel, light or land that he may sight.

2. A lookout similarly placed with reference to the port cathead, and having similar duties except that he looks out for the port side light.

3. A lookout in the starboard gangway or on the starboard end of the bridge, charged with the general duty of looking out for land, lights and vessels.

4. One with similar duties, posted in the port gangway or on the port side of the bridge.

5. One posted near the taff-rail to watch for land, vessels and lights and also to let go the life buoy in case of "Man overboard."

To these, other lookouts are frequently added. Thus there are often two, instead of one, at the life buoys; sometimes one is stationed on the foretopsail yard (though he is not usually kept there at night unless it be in an endeavor to see over a low fog); and occasionally lookouts are stationed near the halliards, ready to lower away in case of a squall.

When the officer of the deck comes up at midnight, he will probably find that all of the lookouts belong to the old watch, and he will, as before stated, have them relieved by men of the new watch. When this has been done and the watch relieved, the new watch will be mustered by the junior officer of the watch, and any men not accounted for will be searched for below.

The lifeboat's crew will then be mustered and vacancies in it filled.

The junior officer of the watch and the Coxswain will carefully inspect the lifeboat and see that she is in good working order, that her detaching apparatus is ready to work, that her oars, compass, boatbox, breaker of water, etc., are provided, and that life lines are bent to the strong back. They will also explain to the men just what part each is to take in lowering the boat in case of necessity.

When the watch has been mustered the men not actually at the wheel, lead or lookout are permitted to make themselves comfortable about the deck and to go to sleep if they desire to do so.

The orderly reports the bells at sea just as in port, and whenever the running lights are set, that is, from sunset till sunrise, when a bell strikes, all the lookouts "Pass the hail"; thus: No. 1 sings out, "Starboard cathead; bright light" (meaning that the green side light is trimmed and burning well); No. 2 passes the word, "Port cathead, bright light"; No. 3, "Starboard gangway"; No. 4, "Port gangway," and No. 5, "Port (or starboard) quarter."

Frequently, too, the officer of the deck, to assure himself that the lights are burning and the

lookouts at their posts and vigilant, will pass the word, "Bright lookout ahead," at which all the lookouts will pass the hail just as though the bell had been struck.

On the even hour, that is, whenever an even number of bells is struck, at sea, the log is hove. Usually, the junior officer of the watch lays aft and heaves the log without orders, and, in such case, he will cause the Boatswain's Mate of the watch to pass the word "Lay aft the reel holders"; at which two afterguardsmen go aft and hold the reel. Sometimes, however, the officer of the deck passes the word, "Heave the log," and the junior officer of the watch and reel holders then lay aft. The officer heaving the log at once reports the speed to the officer of the deck, who, during the day, usually sends word to the Commanding Officer.

Let us suppose, now, that one of the lookouts sights a light; he at once sings out, "Light ho," to which the officer of the deck replies, "Where away?"; the lookout answers, giving the bearing of the light, in points estimated from ahead, abeam, or the quarter; as three points on the port bow, or two points forward the starboard beam, or one point on the port quarter. So, if a lookout picks up a sail or land, he reports, "Sail ho," or "Land ho," as the case may be.

Whenever land or a sail or light is first sighted, day or night, a report of the particulars is made to the Commanding Officer.

The officer of the deck during the night watches at sea must, as soon as he comes on deck, make himself thoroughly familiar with the night orders, as found in the Commanding Officer's night order book.

The wheelmen, lead and lookouts are usually relieved every two hours, but the period of duty will properly be shortened in cold or stormy weather. The relief is ordered by passing the word, "Relieve the wheel and lookouts." The men on duty remain until their reliefs have taken the proper station and have been made acquainted with any special orders in force.

At 3:50 a. m. the watch below is called; the Boatswain's Mate of the watch and his relief passing around among the hammocks and seeing that the men heave out promptly. The watch is then relieved just as at midnight.

At sunrise the word is passed, "Take in the "running lights, lay in the deck lookouts; look-out to the masthead." All of the lookouts who have been posted for night duty (except the one at the life buoy), then leave their stations and a lookout is sent to the foretop-masthead, where he can get a good view. This station will be relieved every two hours during the day.

If running along the coast, or up a river, or entering a harbor, the colors will be set; under no other circumstances are the colors set at sea unless to exhibit them to another vessel.

At sea, no reveille is sounded and the watch below sleeps in till six bells, when all hammocks are piped up.

The morning cleaning routine will not be followed at sea, as the smoke and coal dust render frequent scrubbing useless.

At 7:30 the watch below goes to breakfast, so as to be ready to relieve promptly at 8, at which hour the other watch goes to breakfast. In each case mess gear is spread ten minutes before the hour for breakfast, the word being passed, "Spread mess gear for the (starboard or "port) watch."

During the day, the routine at sea is much the same as that in port, except that the watch is relieved every four hours. At sundown the word is passed, "Get out the running lights, "station the deck lookouts, lay down from the "mast head."

MISCELLANEOUS MATTERS RELATING TO THE SHIP'S ROUTINE AND THE DUTY OF THE OFFICER OF THE DECK.

The officer of the deck will attend at the gang-

way on the arrival or departure of any commissioned officer or distinguished visitor.

In ships where there are apprentices or other suitable men to act as side boys, they attend at the side, when the side is piped as follows:

1. For officials saluted with fifteen or more guns, eight side boys.

2. For officials saluted with eleven or thirteen guns, six.

3. For other officials of and above the relative rank of Commander, and for officials entitled to corresponding honors, four.

4. For other commissioned officers of the Navy, and officials entitled to corresponding honors, two.

On the occasion of the official reception or departure of a civil, diplomatic or consular official, or of any commissioned officer of the Army or Navy, or person entitled to corresponding honors the side must be piped, unless the guard is paraded. The side is not piped for shore boats, but officers coming off in shore boats if in uniform, may be received with the pipe and side boys on reaching the deck. Piping the side for officers may, by order of their Commanding Officer, be dispensed with on board the ship to which they are attached, except when side arms are worn.

All honors, except such as social courtesy demands, may be dispensed with when the reception or departure takes place between sunset and 8 a. m., or when the officer is in plain clothes.

The starboard gangway will, as a rule, be used by all commissioned officers and their visitors; the port gangway, by all other persons.

Every officer or man, upon reaching the quarterdeck, or upon leaving it to go over the side, shall salute the National Ensign. This salute shall be returned by the officers of the watch at hand.

Any officer or man, in uniform or not, when meeting, passing, or addressing either ashore or afloat, his Commanding Officer, or an officer his senior in actual or relative rank, whether in uniform or not, must salute him, and he must return the salute. For more specific rules upon this subject, see the chapter on salutes.

Except where there is a special countersign, boats will vary their answer to a ship's hail, according to the senior officer who may be in the boat, as follows:

1. Flag officer, "Flag."
2. Commodore, "Broad pennant."
3. Captain, the name of the ship under his command.

4. Other commissioned officers, "Aye, aye."
5. Other officers, "No, no."
6. Petty officers, enlisted men and marines, "Hello."

7. Boats not intending to go alongside, will answer, "Passing."

Officers in oral communications shall be addressed by their titles; those below the rank of Commander in the line, and all officers of the staff, may be addressed by their title, or as Mr. or Dr., as the case may be.

The distinctive mark of a ship in commission, other than the National Ensign, is a flag or pennant at the mast head. The distinctive mark of the senior on board is displayed day and night, and is carried at the main; except the flag of a Rear Admiral or "senior officer present," which is carried at the mizzen.

The National Ensign is hoisted at 8 a. m., and kept flying until sunset.

Whenever a ship comes to anchor or gets under way, if there is sufficient light for the ensign to be seen, it is hoisted, though it be earlier or later than the time specified. Unless there are good reasons to the contrary, the ensign is displayed when falling in with other ships of war or when near the land, and especially when passing or approaching forts, lighthouses or towns.

A ship of the Navy entering port at night hoists her ensign at daylight for a short period, to enable the authorities of the port and ships of war present to determine her nationality. It is customary for other ships of war to then show their colors in return.

When at anchor, in port, weather and other circumstances permitting, the Union Jack is displayed above the bowsprit cap or at some other suitable place forward.

The following ceremonies are observed at "colors," on board vessels in commission.

The field music and band, if there be one, are present. At morning colors, the music gives three rolls and three flourishes. At the third roll the ensign is started from the deck and hoisted slowly to the peak, during which the band plays the "Star Spangled Banner." When the ensign leaves the deck or rail, all sentries salute and remain at a salute until the band ceases to play the National air; all officers and men present stand facing the ensign, and salute when it reaches the peak. The same ceremonies are observed at sunset colors, except that the music gives three rolls and three flourishes before the ensign leaves the peak, and all officers and men salute when the ensign touches the deck.

When the ensign is hoisted at sunrise the same honors and ceremonies are paid then and are not repeated at 8 a. m.

On all occasions, in the hoisting and lowering of colors and the displaying of the Union Jack, the motions of the vessel of the senior officer present, in sight, are to be followed.

When a vessel salutes by dipping her ensign, she must be answered dip for dip.

The general regulations on the subjects of lights and fires are as follows:

1. All fires used for cooking shall be extinguished at tattoo (9 p. m.), unless specially authorized by the Commanding Officer to be continued longer for some specific purpose.

2. All lights, except those in the cabins, wardrooms, steerages, staterooms, and those designated by the Commanding Officer as standing lights, shall be extinguished at tattoo.

3. Before tattoo, the lights on the lower deck shall be reduced in number, unless required for the comfort of the crew. All lights in the holds, storerooms and orlops, and all open lights, except those in the officers' quarters, must be extinguished before 7:30 p. m., or at the time of the evening inspection by the Executive Officer.

4. The lights in the wardroom and the steer-

age country and in officers' mess rooms, except one in each, shall be extinguished at 10 p. m., unless the time is extended on special occasions.

5. There shall be at all times during the night a sufficient number of standing lights throughout the open parts of the ship to enable the officers and crew to turn out and get to the upper deck or to attend any duty arising from a sudden emergency.

6. Lights will be supplied between decks in dark or cloudy weather.

7. Special lights may be allowed for use in officers' rooms after 10 p. m.

8. Uncovered lights shall never be left unattended, and covered lights shall be so secured as to prevent breaking or capsizing. Uncovered lights shall never be used in holds, storerooms, orlops, lockers, bilges, or other places below the berth deck, except to test the air.

9. All such lights and fires as the Commanding Officer may deem dangerous shall be extinguished when the magazines are open or when handling or passing powder, explosives or dangerous combustibles.

The general regulations on the subject of smoking are as follows:

1. The Commanding Officers will designate the places in which the officers and crew are

allowed to smoke, and there will be no smoking except in the places so designated.

2. The crew is permitted to smoke from "all hands" to "turn to," during meal hours, and from the time hammocks are piped down until tattoo. Smoking is also usually allowed on holidays, Saturday and Sunday afternoons, and during night watches.

3. Smoking is never allowed in any part of the ship below the gun deck (the spar deck, in single-decked ships), except in the cabin or wardrooms.

4. Smoking in the ship's boats not on detached service at any time during daylight is forbidden.

5. After hammocks are down the crew shall smoke only on the upper deck.

The officer of the deck is the officer on watch in charge of the ship.

Every officer or other person in the ship, whatever his rank, who is subject to the orders of the Commanding Officer (except the Executive Officer), is subordinate to the officer of the deck.

At sea he carries a trumpet, and in port wears a sword belt and gloves, and carries a spy-glass or binocular.

At quarters and in action the officer of the

deck is relieved by the Navigator and repairs to his regular station.

If there be one junior officer of the watch, he will be "officer of the fore-castle"; an assistant to the officer of the deck, specially charged with seeing to the execution of all orders relating to the fore-castle or the forward part of the ship. He can best prepare himself for his duties by learning those of the officer of the deck and keeping himself ready to render that officer prompt and helpful assistance in the discharge of his duties. Usually, he is to act simply as an assistant, but he should be always ready to take the deck; and, indeed, circumstances may arise which render it necessary for him to act upon his own responsibility, as, for instance, where at night, or during a fog, a vessel suddenly appears close under the bows in such a position that collision can be avoided only by the instantaneous use of the helm. Here, there being no time for explanations, the officer of the fore-castle must assume the responsibility, give the order directly to the helmsman, and take the consequences.

If there be two junior officers of the watch, the second one will be the "gentleman of the watch," who is also an assistant to the officer of the deck, and is specially charged with seeing

to the execution of the orders relating to the after part of the vessel. The gentleman of the watch, or, if there is none, then the officer of the fore-castle, takes the observations and fills up the columns of the log hourly, musters the watch, and heaves the log, or reads the patent log.

At sea the junior officer of the watch will muster the lifeboat's crew, will see that the lifeboat is ready for lowering, and will, himself, be at all times ready to go in her in case of emergency.

CHAPTER VI.

PETTY OFFICERS AND MEN AND THEIR SEVERAL DUTIES.

GENERAL.

In the Naval Militia, the selection, appointment, examining and warranting of petty officers is governed, of course, by local laws and regulations, differing widely in most instances from the naval rules upon these subjects.

Rated men in the Navy are "petty officers," those in the Marine Corps "non-commissioned" officers.

Petty officers and enlisted men in the Navy are classified as follows:

CHIEF PETTY OFFICERS.

SEAMAN BRANCH.

Chief Master-at-Arms.

Chief Boatswains' Mates.

Chief Gunners' Mates.

Chief Quartermasters.

ARTIFICER BRANCH.

Machinists.

Chief Carpenters' Mates.

SPECIAL BRANCH.

Yeomen.

Apothecaries.

Bandmasters.

PETTY OFFICERS, FIRST CLASS.

SEAMAN BRANCH.

Masters-at-Arms, 1st class.
Boatswains' Mates, 1st class.
Gunners' Mates, 1st class.
Quartermasters, 1st class.
Schoolmasters.

ARTIFICER BRANCH.

Boilermakers.
Coppersmiths.
Blacksmiths.
Plumbers and Fitters.
Sailmakers' Mates.
Carpenters' Mates, 1st class.
Water Tenders.

SPECIAL BRANCH.

First Musicians.
Writers, 1st class.

PETTY OFFICERS, SECOND CLASS.

SEAMAN BRANCH.

Masters-at-Arms, 2d class.
Boatswains' Mates, 2d class.
Gunners' Mates, 2d class.
Quartermasters, 2d class.

ARTIFICER BRANCH.

Oilers.
Carpenters' Mates, 2d class.
Printers.

SPECIAL BRANCH.

Writers, 2d class.

PETTY OFFICERS, THIRD CLASS.

SEAMAN BRANCH.

Masters-at-Arms, 3d class.

Coxswains.

Gunners' Mates, 3d class.

Quartermasters, 3d class.

ARTIFICER BRANCH.

Carpenters' Mates, 3d class.

Painters.

SPECIAL BRANCH.

Writers, 3d class.

SEAMEN, FIRST CLASS.

SEAMAN BRANCH.

Seamen Gunners.

Seamen.

Apprentices, 1st class.

ARTIFICER BRANCH.

Firemen, 1st class.

SPECIAL BRANCH.

Musicians, 1st class.

SEAMEN, SECOND CLASS.

SEAMAN BRANCH.

Ordinary seamen.

Apprentices, 2d class.

ARTIFICER BRANCH.

Firemen, 2d class.

Shipwrights.

Sailmakers.

SPECIAL BRANCH.

Musicians, 2d class.

Buglers.

SEAMEN, THIRD CLASS.

SEAMAN BRANCH.

Landsmen.

Apprentices, 3d class.

ARTIFICER BRANCH.

Coal passers.

SPECIAL BRANCH.

Baymen.

MESSMEN BRANCH.

Stewards to Commanders-in-Chief.

Cooks to Commanders-in-Chief.

Stewards to Commandants.

Cooks to Commandants.

Cabin Stewards.

Cabin Cooks.

Wardroom Stewards.

Wardroom Cooks.

Steerage Stewards.

Steerage Cooks.

Warrant Officers' Stewards.

Warrant Officers' Cooks.

Ship's Cooks, 1st class.

Ship's Cooks, 2d class.

Ship's Cooks, 3d class.

Ship's Cooks, 4th class.

Mess Attendants.

Petty officers and men take precedence according to this classification. The precedence of two or more holding the same rate is determined by the dates of their respective rates, or, if of the same date, then their precedence is determined by their Commanding Officer.

In the New York Battalion, chief petty officers and petty officers are allowed as follows:

Chief petty officers for a battalion:

One Master at Arms.

One Chief Boatswain's Mate.

One Chief Gunner's Mate.

One Electrician.

One Chief Quartermaster.

One Ship's Yeoman.

One Paymaster's Yeoman.

One Apothecary.

Petty officers for a division:

Two Boatswain's Mates.

One Gunner's Mate.

One Torpedoist.

Two Quartermasters.

Four Coxswains.

These chief petty officers and petty officers take rank in their own grades in accordance with the dates of their warrants. The petty officers are of two classes: petty officers of the line and petty officers not of the line. Petty officers not of the line (Ship's Yeoman, Apothecary and Paymaster's Yeoman) do not exercise authority except in the department to which they belong, or over those placed immediately under their control.

The grades of petty officers of the Naval Militia of New-York and of most other States are assimilated to those of the non-commissioned officers of the National Guard as follows:

Master at Arms to that of Sergeant Major.

Chief Boatswain's Mate to that of Quartermaster Sergeant.

Chief Gunner's Mate and Electrician to that of Ordnance Sergeant.

Chief Quartermaster, Ship's Yeoman and Paymaster's Yeoman to that of Commissary Sergeant.

Apothecary to that of Hospital Steward.

Senior Boatswain's Mate to that of First Sergeant.

Junior Boatswain's Mate, Gunner's Mate, Torpedoist, Quartermaster, to that of Sergeant.

Coxswains to that of Corporal.

BOATSWAIN'S MATES.

The number of boatswain's mates allowed in the ship's company will be determined by her "complement" as fixed by the bureau. Usually there are four, one of whom is rated Chief Boatswain's Mate.

Boatswains are not frequently attached to vessels other than flagships and sailing vessels. In other classes of vessels the duties properly devolving upon the Boatswain are performed by the Chief Boatswain's Mate.

"The duties of a Boatswain are constant and "fatiguing; his station is the forecastle, whence "he can direct the men aloft. He pipes 'all 'hands' for general work, and his mates repeat "the call on their respective decks. Boatswains "in the United States Navy are warrant officers, "and their principal duties are as follows:

"The boatswain is to be generally upon deck "during the day, and at all times when any duty "shall require all hands to be employed. He "is, with his mates, to see that the men go "quickly upon deck when called, and that they "perform their duties with alacrity. He will, "every day, at 7:30 a. m., examine the rigging "and report to the officer of the deck the state "in which he finds it. He is to be careful that "the anchors, booms and boats are properly "secured."

While these duties are, strictly speaking, those of a boatswain yet they all devolve in some degree upon his mates, and throw light upon their duties.

Boatswain's mates are the leading men in the ship's company, and as such are intrusted with much responsibility and authority. They should be the best seamen in the crew, qualified to instruct in all the details of a seaman's duties and to look after and supervise all repairs to spars and rigging. They must be thoroughly familiar with the calls and the handling of the pipe, and not afraid to use their voices.

If there be four boatswain's mates their general stations are as follows:

1. The chief boatswain's mate on the topgallant forecastle looking out particularly for the ground tackle and for work and rigging as far aft as the foremast inclusive.

2. One, called usually the boatswain's mate "of the main," or "of the gangway," stationed in the starboard gangway, just forward of the quarterdeck, and charged with the duty of looking out for the work and rigging on the mainmast.

3. One called the "boatswain's mate of the mizzen," stationed aft by the mizzen mast and charged with similar duties as to that mast.

4. One called the "boatswain's mate of the "gun deck," or "of the lower decks," stationed to look out for work and men below the spar deck.

The parts of the ship thus specified are, at all times, in port, supposed to be under the eyes of the respective boatswains' mates in charge, and there, generally speaking, they remain when on duty. Working all hands, they are stationed in the positions above named and communicate by pipe the orders of the officer in charge of the station. They should act as the immediate assistants to this officer, seconding his efforts and seeing that his orders are properly and promptly executed.

The boatswain's mate "of the main," being in the starboard gangway, near the quarterdeck, is the more immediate assistant to the officer of the deck, and ordinarily passes all routine commands before his mates; but when all hands are called for any special evolution, all the boatswain's mates assemble, and pipe and pass the call in concert.

All the boatswain's mates are the assistants to whatever officer has, for the time being, charge of the management of the ship, and must be ready to enforce, by pipe, voice and example, prompt, energetic and intelligent obedience to the orders of the officers.

GENERAL DUTIES OF A BOATSWAIN'S MATE IN PORT.

The boatswain's mates are called ten minutes before "all hands," so that they may see their own hammocks and those of the hammock stowers lashed and in the nettings in time to call all hands and get the crew's hammocks on deck. When all hands are called they pass around among the men, getting them out, and then superintend the stowing of the hammocks. While coffee is being served out, the boatswain's mates will usually learn from the officer of the deck what cleaning is to be done during the morning watch, and will break out wash deck gear and be prepared to start the work promptly at "turn to." Frequently they get this information and make preparations accordingly the night before. The scrubbing and washing of decks, cleaning of paint work and scrubbing of hammocks are matters which the Boatswain's Mates are relied upon to superintend, and to which they must give special attention.

All the Boatswain's Mates remain on duty from "all hands" in the morning until "pipe down" at night; and must be at all times alert to see that everything is kept clean and that the gear and rigging are taut and neatly laid up.

Usually, the Chief Boatswain's Mate is sent

around the ship in the dinghy just before 8 a. m., to see that the yards are square, the rigging taut, and the sides clean. All Boatswain's Mates must make frequent examinations of the rigging and note and report its condition as to strength, seizing, water-proofing, etc., and must see to the placing of "square marks," or "two block" marks on the running rigging, and to the painting and slushing of the masts and spars. They will not, of course, have painting or any similar work begun without the permission of the officer of the deck.

Before quarters, both morning and evening, they are specially charged with the duty of seeing the decks clean and clear.

In wet weather they must see to the slacking up of the rigging so that it will not tauten and spring a spar.

Before going to sea they must attend to the placing of the chafing gear and to the proper securing of guns, boats, spare spars, and all other movable articles about the decks.

GENERAL DUTIES OF A BOATSWAIN'S MATE AT SEA.

In some ships the Boatswain's Mates stand regular watches at sea, the several mates coming on duty successively; in others they stand

watch, successively, from 8 p. m. to 7 a. m., and are all on duty and at their regular stations from 7 a. m. to 8 p. m. The latter arrangement seems preferable, as it leaves them free during the day to look after their own parts of the ship, where the spars and rigging will almost certainly require their attention every day that the ship is under way.

The first duty that the Boatswain's Mate usually has to perform after coming on watch is to see the lead, wheel and lookouts relieved. He passes around from one of these stations to another and learns whether the member of the new watch has relieved that of the old. He must be especially careful to see that the men at these stations are good men, competent to perform all the duties required of them. If he thinks that any man sent to the lead or wheel or lookout duty is incompetent or unfit for such duties, he will cause him to be at once relieved.

When the watch has been relieved, the boatswain's mate will see the life boat falls clear and the boat ready for lowering; will have the Coxswain inspect her, and see that the plug is in, that the oars are in place and secured with trail lines; that an oar is fitted for steering, and that the compass, water, boat box, bread bag, etc., are ready. He will then take a look at the

rigging, spars and sails, and ease off or haul taut the rigging, as required. If sailing close hauled and the sheets are not home or the yards not braced sharp up, he will get jiggers on the sheets or braces so as to make the sails draw to the best advantage.

During his watch he must see that windsails and ventilators are properly trimmed, and will change them without special orders when necessary. He will see that all the men in the watch do their fair share of work, and that the look-outs are vigilant and attentive.

The Chief Boatswain's Mate is stationed in the navigator's division, the others are usually in the gun divisions, where they are captains of guns.

GUNNER'S MATES.

The number of gunner's mates allowed in a vessel's complement will be determined by the size and character of her battery.

The gunner's mates usually stand no watch at sea, and their duties under way are the same as when at anchor. They are the assistants to the gunner, and, subject to his direction and control, are charged with the care of the magazines, shellrooms, ammunition lockers, guns, gun-gear, arms, and the other ordnance outfit and stores

of every variety, as well as with the stowing and preservation of powder and projectiles. They must be thoroughly familiar with the manner of handling, securing and cleaning the guns, able to put up all sorts of ammunition and to prepare fuses, and conversant with the kinds and weights of charges for guns of the various calibres.

At quarters, one gunner's mate is stationed in each magazine, and at least one at each gun division. Those stationed in the magazines are responsible for their good order, and for the stowage of their contents; those stationed at the battery must see that the guns, arms and gun-gear of their respective divisions are kept clean and ready for service. Their special duties at quarters, together with detailed instructions concerning the care of the battery will be found fully set out in the "Gunnery Drill Book."

QUARTERMASTERS.

There are usually allowed to a ship four Quartermasters, one of whom is rated Chief Quartermaster.

Hammersly defines a quartermaster as "a petty officer who assists the navigator in the minor details of his various duties," and adds, "the Quartermasters have charge of the log, leads,

"lights, colors, signal apparatus, compasses, helm, etc., and in action are stationed at the conn, helm and relieving tackles, attend to making and reading signals, and when on soundings heave the lead. They keep regular watch from the beginning of a cruise till a ship goes out of commission."

This is a very accurate statement, though many of the duties enumerated pertain to the billet of chief quartermaster rather than that of the other Quartermasters. Thus, it is he who has, under the navigator, immediate charge of the logs, colors, etc. So under like direction, it is he who marks the lead and log lines, and repairs the colors and flags.

Quartermasters usually stand watch in two watches at sea, and in four watches in port. They go on duty when the vessel goes in commission, and from that time until she goes out of commission they stand watch, those in the port and those in the starboard watch coming on duty alternately, so that by a reference to the uniform of the Quartermaster on watch one can tell which watch would be on duty if regular sea watches had been stood by the ship's company from the time of going into commission. When the ship leaves port and the standing of watches begins, that watch to which

the Quartermaster on duty belongs is always called to finish out the watch with him.

A Quartermaster must be a good helmsman, able to steer not only a compass direction, but a full and by course. He must understand fully the principle of the ship's steering gear, and know how to keep it in order and repair it. He must be familiar with the compass, and quick to determine how much helm he must give the ship to change her head a given number of degrees or points. The markings of the lead and log lines must be at his fingers' ends as should also be the wigwag alphabet and the various signal flags. Much of the duty relating to wigwags and other signals is, it is true, performed by the signal man, but he is the assistant to the Quartermaster, who should always be competent to direct or correct him. He must be an accurate and reliable leadsman. He must endeavor to know by name and rate, as soon as possible, all the men in the ship's company. Especially should he be acquainted with the petty officers. He must learn where the hammocks of the master-at-arms, boatswain's mates, ship's cook and hammock stowers are swung, so that he can call them when required. He must know the rooms of the different officers of the ship, so that when sent below to call a relief he may not wake the

wrong person. The flags of different nations must be familiar to him, so that on reporting a vessel he may, if her colors are shown, give her nationality. He must study, with especial care the rigs and appearance of all men-of-war with which he falls in, so that he may readily recognize them should they be met again.

GENERAL DUTIES OF A QUARTERMASTER IN PORT.

Some rules concerning the duties of the Quartermaster of the watch will be found in the chapter on ship routine. Generally speaking, it may be said that a Boatswain's Mate should be principally voice and pipe, while a Quartermaster should be principally eyes and glasses. He should be the most alert man in the ship. His watch should be stood from some elevated position, and as soon as the ship has come to anchor he should from there take a careful view of surrounding vessels and landmarks, so that he may be able to tell instantly if the ship or any neighboring vessel begins to drag. He should also make himself thoroughly familiar with the local tidal peculiarities, including not only the times and strength of the tides, but the location, direction and force of eddies at different stages of the tide. Frequently, by ob-

serving the courses taken by local boatmen or by watching how the fishing-boats at anchor ride to the tide, he will be able to give valuable information to boat officers and coxswains, and will save the boats' crews much pulling. He should study weather signs carefully, and endeavor to make himself weatherwise, and he must especially be acquainted with the prevailing winds in the port of anchorage, and with the hours when changes in the force or direction of the wind may be expected.

He must report to the officer of the deck not only when a boat approaches the ship, but when a vessel entering or leaving the harbor will pass close aboard, and also whenever the tide changes or the wind shifts or the ship drags or changes her heading. When other men-of-war are in port he must be specially vigilant watching them for signals, etc.

Frequently, at night, he is required to keep a drift lead over the end of the bridge, and to feel the line from time to time so as to detect dragging.

He must always see that colors and flags are provided and on deck in ample time before being required for use.

At night he must hail all approaching boats.

GENERAL DUTIES OF A QUARTERMASTER AT SEA.

As already stated, when the vessel is in port but one of the Quartermasters is on duty at a time, so that they usually stand watch in four watches. When under way, however, two of them must at all times be on duty, so that they stand watch in two watches. One of the Quartermasters on duty at sea stands his watch on the bridge, or other elevated structure, and has duties very similar to those he performs in port—that is, he is the eyes of the officer of the deck, to whom he reports all important events, just as he does in port. The other Quartermaster is at the “conn”—that is, he is in charge of the men at the wheel, and it is his duty to see that the ship steers the course assigned. Directions will sometimes be given to him by naming the course the vessel is to steer. In such a case he repeats the exact words of the order, sufficiently loud to be heard by the officer issuing it. Thus the chances of a misunderstanding are avoided. When the ship has been brought to the desired course he reports “On her course, sir.” In other cases the order will simply be to put his helm up or down, or port or starboard, or let her come up, or go off, or to meet her; and in any of these cases he should repeat the

words of the order so that the officer issuing it may hear and know that his commands are understood, and he should, as before, report when the order has been executed. In some of the new ships the steering is done by moving a small wheel, which requires but one man to handle, and in such cases the steering is done by the Quartermaster.

COXSWAINS.

A Coxswain is a petty officer charged with the care of a boat. When on duty in his boat away from the ship he has full authority over her and her crew unless an officer be present.

In a double-banked boat the Coxswain takes the tiller whenever the boat is manned, and steers her and gives all orders to her crew, unless otherwise directed by the boat officer. The practice in the latter matter differs in different ships. Usually when the boat is called away the Coxswain sees that the crew enter her quickly, and get her at once to that gangway to which the officer of the deck directs him to come.

He sees all his crew in their places, the oars ready for getting up or out and the colors shipped, and then reports to the officer of the deck or boat officer that the boat is manned and ready to shove off. If there be no boat officer,

this report will be made to the officer of the deck, from whom the Coxswain will receive his orders. He will then take charge of the boat, execute his orders, return to the ship, report his return to the officer of the deck, and then see that the boat is hauled out or hooked on or otherwise disposed of as may be directed. If, however, there be a boat officer, the orders will of course be given to him by the officer of the deck. He may then, if he so desires, take charge of the boat and give all orders to the crew concerning the handling of oars, etc. He may, however, and generally does, leave the actual giving of the commands to the Coxswain. In such a case the boat officer, on entering the boat, will direct the Coxswain to shove off, and when this command has been executed will instruct the Coxswain as to where he is to land. The Coxswain will then give all necessary commands and make the landing at the designated point.

In a double-banked boat the Coxswain will always have the tiller, whether there be officers in the boat or not. In a single-banked boat, however, the Coxswain will pull the stroke oar if there are officers in the boat, and the senior line officer will take the yoke ropes; if there are no officers in the boat, the Coxswain takes the yoke ropes, and one side pulls with one oar less than the other side.

The number of Coxswains allowed to a ship is, of course, determined by the number of boats she carries.

The rating of "Coxswain" is rarely mentioned without including with it the name of the boat to which he belongs. Thus we speak of the "Coxswain of the barge," "Coxswain of the first cutter," and the like.

In the morning watch, while the cleaning is going on, the Coxswain, assisted by one or more of his crew, if necessary, will put his boat in good condition, scrubbing her or her gear whenever necessary. He will then see that all her fittings, including oars, boathooks, fenders, colors, compass and breaker of fresh water are in her. Before lowering her he must see that the plug is in. He must frequently observe the falls, strong back and davits, and see that they are strong and safe.

When bringing his boat to the gangway for use he must see that the colors are shipped, the cushions in place, his men on the proper thwarts and in the proper uniform, the oars clear for getting up or out and the bow oarsmen handling the boathooks.

When the boat is to be hoisted he sees that she is properly hooked on and that two men are in her to tend the falls and stoppers, and keep her

clear of the side. When at the davits he will see that the plug is out and the boat free from water.

If at sea and the boat is to be the lifeboat, he sees that she is provided and fitted, as mentioned in the chapter on ship routine.

He must understand thoroughly the handling of boats, under sail and under oars; must know how to steer by the compass or the sails; must know how to salute, and be prompt in doing so; and must be familiar with the call and recall for his boat.

Each man in the boat is responsible for the handling of the fender at his thwart, and the bow oarsmen are responsible for the painter. When the boat is under way all the fenders and the painter must be in her, and nothing allowed to hang or trail over the side.

The Coxswain must know how to answer hails, and when returning to the ship at night will give the proper answer, depending on the rank of the senior officer in the boat. (See chapter on ship's routine.)

The general regulations governing boat salutes are as follows:

1. When meeting or passing the boat of a flag officer or commodore with flag or broad pennant flying, boats flying narrow pennants

shall salute by lying on oars; all other boats shall salute by tossing in a double banked or trailing in a single banked boat.

2. Any officer in a boat meeting or passing his Captain with pennant flying shall salute him by lying on oars, and, when the Captain is not flying his pennant, shall salute with the hand. Other Captains senior in rank to the saluter shall be saluted in the same manner.

3. Every officer when meeting or passing a boat containing an officer his senior, whether in uniform or not, shall salute.

4. Only the senior officer (and the coxswain) in the boat saluted shall return the salute.

5. A coxswain or enlisted man acting as such, and in charge of a boat meeting or passing officers in other boats, or when steering a boat giving or returning a salute, shall stand and salute.

6. Boatkeepers, and all other men in boats not under way and not containing an officer, shall stand and salute when an officer goes alongside, leaves the ship or passes near them. They shall remain standing until the boat passes or reaches the ship's side. This rule does not apply to men working on the ship's side.

7. In boats under sail, or engaged in towing, or heavily laden, only the hand salute will be given.

8. At landings and gangways, juniors shall give way to seniors, and at all times juniors shall show deference to their seniors by abstaining from crossing the bows of their boats, from needlessly passing them, from crowding them and from ignoring their presence.

The national ensign is always displayed from boats between 8 a. m. and sunset, when away from the ship.

When the ship is dressed, boats absent from the ship or at the booms display ensigns.

Boats absent from the ship set and lower their colors with the ship to which they belong.

If a boat is sent away from the ship at sea, she must be provided with sails, oars, bucket, water, provisions, compass, lantern, candles, matches, rifles and cartridges, and such other articles as the special occasion or duty requires.

A moderate supply of provisions and water must be kept in all boats when at sea.

At sea, one boat on each side, adapted for use as a lifeboat, must always be kept ready for lowering. In these must always be kept life preservers, water, bread, a compass, and a lantern with a reserve supply of oil and means of ignition. The detaching apparatus must be kept in order and ready for use, the steering oar shipped, and such other dispositions made

as will render these boats most effective and safe in a seaway as lifeboats.

At sunset, when at sea, the coxswains of both lifeboats report to the officer of the deck the condition of their boats and crews in respect to readiness for service; and at the beginning of each watch the coxswain of the lifeboat's crew of the watch makes the same report.

A line officer is assigned to general charge of each boat, and is responsible for her general condition, armament, equipment and outfit, and for the proper instruction of her crew in their duties. As a rule he commands her when on special duty.

DUTIES OF A SEAMAN.

The defining of a seaman's duties is no easy matter. The best-known exposition of them is that given by one of the Chicago's men to a Naval Militiaman to whom he said: "A seaman 'does nothing till he's ordered to do something, 'and then he does it damned quick.'"

In a general way it may be said that it is a seaman's duty to know how to do, quickly, quietly and efficiently, whatever an officer may order him to do.

Without attempting to describe in detail what these various duties are, we may say that there

are two essential particulars in which a good seaman differs from other men.

The first is in his fertility of resource. Just as a woman can make a hairpin answer the purpose of an entire chest of tools, so a good sailor can accomplish much with but meagre materials. He is essentially a "handy man," a jack of all trades, and reasonably proficient in every one of them. Further, he is taught to make up his mind quickly, and having made it up, to proceed in accordance with his first determination without stopping to waste time in a consideration as to whether there was not some second thought that might have been better than the first.

His second distinguishing characteristic is a readiness to move quickly when spoken to. No good seaman waits to have a command repeated or to inquire whether it was intended to apply to him. A man who does this on shipboard is worse than worthless—he is in the way. When an order is given aboard an efficient ship, it is not more than completed when some man moves, and moves on the jump. Prompt obedience is the pride of every good sailor and the delight of his officers. It is not at all necessary that a sailor should move on the run, or that his rate of locomotion should be more rapid than that

of the ordinary man, but he should and does move more promptly. He does not stand and think, but if he has to do any thinking in the matter he does it while he is moving to obey the orders. There is nothing else that does so much to promote efficiency, or that Naval Militiamen should strive so hard to acquire as this habit of spontaneous, instinctive movement toward the obedience of an order before the voice in which it was given has died away.

SUGGESTIONS ABOUT BEARING AND DEPORTMENT ON SHIPBOARD.

Never whistle on board ship.

During exercises and drills avoid everything that may result in noise or confusion; let silence and quiet prevail. Avoid giving orders or making suggestions or calling out to your shipmates to do this or that, remembering that the voices of none but officers and petty officers should be heard at exercises.

Answer direct questions from an officer by "yes sir" or "no sir," but when an oral order is received and understood, acknowledge it by "aye, aye, sir," which should mean, "I understand your order and have already started to obey it."

Never leave articles about the deck; if you

do, and the Master at Arms is vigilant, you will find them in the lucky bag.

Officers and men entering a boat get in in the inverse order of rank, the junior entering first; they leave the boat in the order of their rank.

Petty officers and men must not use the officers' ladders, except when on duty.

Petty officers and men not under arms remove their hats on entering the officers' quarters, and, except when on duty, do not enter those quarters without permission.

CHAPTER VII.

SALUTES.

From the very day of enlistment it should be the earnest endeavor of every Naval Militiaman to familiarize himself with the rules and customs regulating salutes, and to know, not only when and whom, but how to salute. The rules upon the subject are neither numerous nor difficult to acquire; ignorance of them is inexcusable in a Naval Militiaman and will bring discredit on the organization to which he belongs.

The first consideration is, what is to be saluted? The answer is, first, the National ensign; and second, certain persons.

1. "Every officer or man, upon reaching the "quarter-deck or upon leaving it to go over the "side, shall salute the National ensign. This "salute shall be returned by the officers of the "watch at hand."

This salute to the ensign, it should be observed, is given whenever an officer or man comes on the quarter-deck, whether he comes over the side, or from below, or from forward.

In any case in fact, as he steps upon the quarter-deck, he salutes the National ensign. In leaving the quarter-deck he does not salute unless he be going over the ship's side. On coming on deck by a ladder forward of the quarter-deck he does not salute.

2. Certain persons are to be saluted, and the question is, what persons? The general answer is "officers." This applies to the officers of other services, as well as of our own, and to officers of the Army as well as those of the Navy. Petty officers and enlisted men should not be saluted. An officer should be saluted (this does not refer to salutes with cannon) whether in uniform or not. "Any officer or man, in uniform or not, when meeting, passing or addressing, either ashore or afloat, his commanding officer, or an officer his senior in actual or relative rank, whether in uniform or not, shall salute him." In the militia services, where officers and men frequently meet each other on unofficial and purely social occasions, common sense dictates the frequent omission of these salutes.

The next question is, "by whom shall an officer be saluted?" And the answer is, by all his juniors. In case of seniors, he salutes first, they returning his salute.

Next is, "when shall an officer be saluted?" In general, it should be whenever his junior meets, passes, addresses him, or is met, passed or addressed by him.

Now we must determine how the salute must be made.

This depends upon the circumstances of the saluter. We may advantageously consider this question under two phases, by supposing, first, that the saluter is not under arms; second, that he is under arms.

1. If not under arms, he will be either (a) in ranks, in which case he never salutes unless so ordered; or (b) out of ranks, in which case (if covered) he makes the hand salute. This is the only salute that should ever be made by officers or men not under arms, and it should be made strictly as prescribed in the "Instructions for Infantry."

Come to attention. "Bring the right forefinger to the lower part of the head-dress above the right eye, thumb and fingers extended and joined, palm to the left, forearm inclined at about forty-five degrees, hand and wrist straight. The salute being returned, drop the arm by the side." This salute is always rendered with the right hand.

If the man be uncovered, he faces the officer

and stands at attention without saluting. You can render no man a higher salute or mark of respect than to stand uncovered in his presence.

As already stated, if the man be in ranks, he does not salute at all except when ordered. The person in charge of the command will salute officers, the men in ranks will not.

Even if an officer addresses a man in ranks, no salute is given, the man not being supposed to raise his hands. If he be directed to fall out of ranks, he does so, saluting as he leaves his place.

2. Now consider the case of a man under arms. In this case he will be covered, since a man under arms never uncovers. He will be either (a) in ranks, in which case, as before, he will not salute unless so ordered; or (b) out of ranks, in which case he will salute officers under the same circumstances that would call for a salute from a man not under arms.

If he be under arms, we may consider the two cases of his being armed (a) with a rifle, and (b) with a cutlass.

(a). If out of ranks and armed with a rifle, he salutes all officers by making the rifle salute, as prescribed in Section 137 of the "Instructions for Infantry." It should be stated that in making this salute the piece is brought in

against the right shoulder, and the left hand dropped by the side. Then carry the left hand to the hollow of the right shoulder and make the salute as prescribed.

(b). If out of ranks and armed with a cutlass, two cases may arise (c) where the cutlass is not drawn, in which case the man salutes with the hand, just as if not armed; and (d) where the cutlass is drawn, in which case an enlisted man salutes by making the first motion of the "present sword" as prescribed in paragraph 572 of the "Instructions for Infantry and Artillery."

These are the general rules which will aid in determining when, how and whom to salute. There are other special rules founded partly on custom which should be observed, and which are as follows:

1. "A petty officer or man in command of a detachment, brings his detachment to attention, and salutes all officers with the hand, if unarmed; with the rifle salute, if armed."

2. "No salutes are rendered when marching "in double time."

3. "A petty officer or man, with a rifle or drawn sword, makes the prescribed salute with "the rifle or sword before addressing an officer," and also after receiving the reply.

4. "When an officer enters a room where

"there are enlisted men (not at meals) 'attention' 'is called by some one who perceives him, when 'all rise, remain standing in the position of attention, and preserve silence until the officer 'leaves the room."

5. "When any member of the crew is seated 'and not at work, he shall rise upon the approach of an officer and salute him. If the officer remains in the vicinity some time, the 'salute need not be repeated. Men actually engaged in work are not required to cease working and salute on the approach of an officer, 'unless addressed by him."

6. Before saluting at a halt, the position of attention should always be taken.

7. An officer in command of an armed detachment acknowledges, simply by a personal salute, the salutes given him by passing officers or enlisted men.

8. Though not prescribed by regulations, it is proper and desirable that every officer and enlisted men not in ranks should ordinarily salute the National Ensign whenever he meets or passes it, and whether he be in uniform or not.

CHAPTER VIII.

Some standard books on professional subjects.

Foreign books may be obtained through B. F. Stevens, 4 Trafalgar Square, Charing Cross, London. In remitting, it is safe to estimate that 25 cents per shilling of cost herein mentioned will cover the cost of the book, and the postage and commission.

EXPLOSIVES.

SUBMARINE MINES AND TORPEDOES AS APPLIED TO HARBOR DEFENSE. 1889. John T. Bucknil, 35 Bedford St., London.

NAVAL CONSTRUCTION.

MODERN SHIPS OF WAR. By Sir E. J. Reed, Rear Admiral Edward Simpson, U. S. N., and Lieutenant-Commander J. D. J. Kelly, U. S. N. Harper & Brothers, New York. \$2 50.

A MANUAL OF NAVAL ARCHITECTURE. W. H. White. 1893. £1 4s. Third edition.

NAVIGATION, ETC.

THE NEW AMERICAN PRACTICAL NAVIGATOR. 1880. Nathaniel Bowditch. Published only by Navy Department.

WRINKLES IN PRACTICAL NAVIGATION.

Captain S. T. S. Lecky, R. N. R. 1881. 15s.

NAVIGATION. Commander Asa Walker, U.

S. N. 1888. \$1 35. Storekeeper, Naval Academy, Annapolis.

ORDNANCE.

EXTERIOR BALLISTICS. Lieutenant-Com-

mander, R. R. Ingersoll, U. S. N. 1893. \$1 25.
Storekeeper, Naval Academy.

INTERIOR BALLISTICS. Lieutenant-Com-

mander R. R. Ingersoll and Lieutenant J. F.
Meigs, U. S. N. 70 cents. Storekeeper, Naval
Academy.

TEXT BOOK OF ORDNANCE AND GUN-

NERY. Lieutenant-Commander R. R. Ingersoll, U. S. N. 1894. \$2 65. Storekeeper, Naval Academy.

VELOCITY AND PRESSURE IN GUNS. Lieu-

tenant J. H. Glennon, U. S. N. \$1. Naval
Institute, Annapolis.

TACTICS.

ELEMENTARY NAVAL TACTICS. Com-

mander W. B. Hoff, U. S. N. 1894. John
Wiley & Sons, 53 East Tenth st., New York.

THE INFLUENCE OF SEA POWER UPON

HISTORY. Captain A. T. Mahan, U. S. N.
1890. Boston. Little, Brown & Co.

NAVAL WARFARE. 1891. Rear-Admiral P.
H. Colomb, R. N. London.

COAST DEFENSE BY GUNBOATS. By
George Elliot. 1887. 7s. London.

TORPEDOES, MINES, ETC.

TORPEDOES FOR NATIONAL DEFENSE.
Lieutenant W. H. Jaques, U. S. N. 1886. G.
P. Putnam's Sons, New York.

TORPEDOES AND TORPEDO WARFARE.
C. Sleeman. 1889. £1 4s.

SUBMARINE MINES AND TORPEDOES AS
APPLIED TO HARBOR DEFENSE. John
T. Bucknill. 1889. 12s. 6d.

MISCELLANEOUS.

SMALL ARM FIRING REGULATIONS.
Blunt. 1892. Charles Scribner's Sons, New
York.

THE SAILOR'S HANDBOOK. Captain Bed-
ford, R. N. 7s. 6d.

THE SAILOR'S POCKET BOOK (NEW EDI-
TION). Captain Bedford, R. N. 7s. 6d.

THE SAILOR'S HANDY BOOK. Lieutenant
E. F. Qualtrough, U. S. N. 1881. Charles
Scribner's Sons, New York.

THE BOAT-SAILER'S MANUAL. Lieutenant
E. F. Qualtrough, U. S. N. 1886. Charles
Scribner's Sons, New York.

LUCE'S SEAMANSHIP. (WARD'S EDITION).

Storekeeper, Naval Academy.

COFFIN'S NAVIGATION. Storekeeper, Naval Academy.

RADFORD'S HANDBOOK OF NAVAL GUNNERY. Lieutenant Radford, U. S. M. C.

D. Van Nostrand, 24 Murray st., New York.

CUSTOMS OF THE SERVICE. A. H. Dutton.

1893. 50 cents. Nathan Sawyer & Son, 70 State st., Boston.

CHAPTER IX.

It is believed that petty officers and seamen may obtain helpful suggestions as to the proper lines of study by reading and preparing themselves to answer the following questions, which constituted an examination of petty officers of the Fourth Division, 1st N. B., New York.

Miscellaneous questions for all candidates for warrants.

SEAMANSHIP.

I. Name and describe the different rigs of vessels, from sloop to full-rigged ship.

II. Name all head booms, masts and yards of a full-rigged-ship—man-of-war.

III. Name all sails of a full-rigged ship—man-of-war.

IV. Where is the (a) quarterdeck, (b) half-deck, (c) berth deck, (d) orlop deck, (e) poop deck of U. S. S. Minnesota?

V. Name and make the principal (a) knots, (b) splices, (c) hitches and (d) bends.

NAVIGATION.

I. (a) What lights are carried by a vessel at

anchor? (b) What lights are carried by river steamers and coasters? (c) What lights are carried at sea by a sailing vessel? (d) What by a steamer? (e) What by a tug engaged in towing?

II. (a) Approaching a channel from seaward, on what hand do you leave the red buoys? (b) On what hand do you leave a buoy with red and black stripes, and what does it indicate? (c) What does a buoy with white and black perpendicular stripes indicate, and how must it be passed?

III. (a) Two vessels meeting end on or nearly so, how do they manoeuvre? (b) If steamers, what signals are given? (c) Which has the right of way, steamer or sailing vessel? (d) Two sailing vessels crossing, one close-hauled and one sailing free, which has the right of way?

IV. (a) In general, what day and night signals are used in the United States Navy? (b) What flags are hoisted to make signal 493?

V. (a) Box the compass from south to west. (b) What is the lubber's mark? (c) Give marks on lead line up to ten fathoms. (d) What is a drift lead? (e) How many feet in a fathom? (f) What is a knot?

BOATS.

I. (a) What is the position of oars at "toss"?

(b) What at "oars"? (c) When do bowmen get out their oars, and how do they do it?

II. (a) What is done at order "in bows"? (b) What at order "way enough"?

III. In charge of a boat, you meet a boat containing (a) Admiral, (b) Captain, (c) Wardroom officer, what do you do?

IV. Boat coming alongside at night, the answer to the hail is (a) hello, (b) no, no, (c) aye, aye, (d) "New York," who in each case is in the boat?

ORDNANCE AND GUNNERY.

I. (a) Draw diagram and give stations of men at 6-in. B. L. R., in broadside. (b) What is done at form for inspection?

II. (a) Draw diagram and give stations of men at 3-in. B. L. R. at "man the drags." (b) How dismount the S. B. howitzer?

III. Describe "crews to front" 3-in. B. L. R.

IV. Describe "crews to rear" 3-in. B. L. R.

INSTRUCTIONS FOR INFANTRY U. S. NAVY.

I. (a) In charge of squad, what order is given to move squad to right? (b) To move squad to rear? (c) To move squad to front?

II. (a) What is the position of men at "rest"?

(b) How do petty officers and men salute when not under arms? (c) How when under arms?

III. You are first petty officer—form company. You are first petty officer—dismiss company.

IV. (a) Company in line, give position of first four petty officers. (b) Order "fours right" has been executed, give position of first four petty officers.

V. Execute the different evolutions in the manual of arms, stating from what positions you may execute each manoeuvre, and explain each as you would to a recruit.

MISCELLANEOUS.

I. (a) What ceremonies are observed at colors? (b) When, where, and by whom are colors hoisted?

II. (a) What is a meal pennant? (b) Where hoisted? (c) Its signification?

III. Describe collar devices worn by Naval officers, from Captain to Ensign.

IV. Describe rating marks of Boatswain's Mate, Gunner's Mate, Quartermaster, and Coxswain.

SPECIAL QUESTIONS FOR PARTICULAR PETTY OFFICERS.

BOATSWAIN'S MATES.

1. Name and execute the different "pipes."

2. Draw a rough diagram and name the different parts of an anchor.

3. What do you mean by a standing rigging? (b) running rigging? (c) ground tackle?

4. Describe a mooring swivel. What is a shot of chain? What is a swivel? What is a shackle and how is it marked?

5. Explain the methods of anchoring and getting under way, (a) from one anchor, (b) from two anchors.

6. Draw a diagram of a compass card, naming all the full points.

7. What are "square marks" and two block marks, and give some examples of the use of each?

8. How is ship's company divided into watches?

9. Describe the new quadrantal system of organizing a ship's company.

10. What are the duties of the men on anchor watch, and how are they detailed for that duty?

11. At sea, what are your duties as to the lifeboat?

12. What are your duties on relieving the wheel and lookouts?

13. What lookouts are stationed at sea?

14. What are side boys, and how are they called?

GUNNER'S MATES.

1. Give as much as you can of the ballistic table.
2. Give a rule for finding (a) the weight of the projectile, and (b) the weight of the powder charge, knowing the calibre.
3. Describe the general arrangement of magazines.
4. Describe the passing scuttles and chains of supply.
5. Explain the general system of organization as gun divisions on shipboard.
6. Define (a) windage, (b) drift, (c) rifling, (d) sliding leaf, (e) preponderance.
7. Explain how to call away (a) boarders, (b) riflemen, (c) firemen (in action).
8. Describe the (a) powder charges, and (b) projectiles in use in the Navy.
9. Name and briefly describe the torpedoes in use in the U. S. Navy.
10. Define (a) auto-mobile torpedo, (b) dirigible torpedo, (c) controllable torpedo, (d) mines, (e) counter mines, (f) torpedo-catcher, (g) detonator, (h) fuse, (i) primer, (j) machine gun, (k) rapid-fire gun, (l) main battery, and (m) secondary battery.
11. Explain fully how to instruct a recruit in

the principles of aiming, sighting and firing small arms.

12. Dismount and then assemble the Lee magazine rifle, and the Navy revolver.

13. Give the revolver manual.

QUARTERMASTERS.

1. Draw a compass card, and box the compass to quarter points.

2. Describe (a) the chip log, (b) the patent log, and give the method of determining the ship's speed by each.

3. Define (a) fathom, (b) knot, (c) nautical mile, (d) statute mile, (e) a "mark," (f) a "deep," (g) a burgee, and (h) a pennant, (i) a hand lead, (j) a deepsea lead.

4. Describe and give the meaning of the whistle signals used in navigation.

5. Give the Navy wigwag alphabet and the usual abbreviations.

6. Give the Very's Code and draw, in colors, (a) the Navy numerical flags, (b) the repeaters, (c) the answering pennant, (d) the annulling, (e) the interrogatory, (f) the geographical, (g) the cornet, (h) the general recall, (i) the guard flag, (j) the meal pennant, (k) the danger flag, and (l) the despatch flag.

7. Draw, in colors, the flags indicating the

following signals: (a) Longitude 70° West, (b) 45° East, (c) latitude 25° North, (d) 13° South.

8. Briefly describe the flags of the principal maritime nations.

9. What are the quartermaster's duties at "colors," morning and evening?

10. How do you steer a compass course; how a full and by course?

11. As quartermaster at the conn, what do you say and what do you do on receiving from the officer of the deck each of the following orders: (a) starboard, (b) hard a port, (c) steady, (d) meet her, (e) port a point, (f) South, Southeast, (g) full and by, (h) let her go a point free, (i) ease down the helm, (j) bear up, and (k) let her go off?

12. What are the duties of a man at the drift lead?

COXSWAINS.

1. While Coxswain in charge of a boat you meet, in succession, boats containing (a) an Ensign, (b) your Commanding Officer (a commander), (c) a Rear Admiral; what do you do in each case, if your boat is first, under oars, second, under sail?

2. Give all the answers to the "hails."

3. You are Coxswain of a cutter, what do

double banked boat? Give the orders necessary for getting away from, and coming to, the gangway, in (a) a single banked boat, (b) a double banked boat, (c) a cutter under sail, (d) a steam cutter.

13. Lay in oars and make sail.

14. Take in sail, unstep masts, and get under oars.

15. Make a landing through the surf.

16. Describe the principles of the stroke (as you would instruct a recruit), in (a) a single, (b) a double banked boat.

double backed boat? When the sailors are necessary
for getting away from, and coming to, the port-
way, in (a) a single backed boat, (b) a double
backed boat, (c) a cutter under sail, (d) a motor
cutter.

II. Lay in oars and make sail.

III. Take in sail, making mane, and get under
way.

IV. Make a landing through the port.

V. Describe the principles of the motor (a)
the motor engine, (b) the motor, (c) the motor, (d)
a double backed boat.

you do when she is called away, (a) if she is hoisted, (b) if she is at the boom?

4. Your boat (a cutter) is manned and at the gangway; the officer of the deck gives you a letter, directing you to deliver it to the flag-ship and to wait for an answer; describe fully what you do and what commands you give from the time you leave your ship until you return to her.

5. When do you go to the starboard and when to the port side of a ship?

6. Having returned from a trip ashore, and your boat being at the gangway, manned, what do you do on receiving the following orders from the officer of the deck: (a) haul her ahead of the gangway, (b) haul her out, (c) hook her on, (d) lay off and wait orders?

7. What are the duties of a Coxswain during a morning watch in port?

8. What are the duties of the Coxswain of the lifeboat at sea?

9. What are the duties of a boat keeper?

10. Describe (a) the sliding gunter, (b) the lug rig. How do you tack and how wear, with each of these rigs?

11. Station a cutter's crew, (a) under oars, (b) under sail.

12. What is a single banked and what a

double banked boat? Give the orders necessary for getting away from, and coming to, the gangway, in (a) a single banked boat, (b) a double banked boat, (c) a cutter under sail, (d) a steam cutter.

13. Lay in oars and make sail.

14. Take in sail, unstep masts, and get under oars.

15. Make a landing through the surf.

16. Describe the principles of the stroke (as you would instruct a recruit), in (a) a single, (b) a double banked boat.



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